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No. 2196

FEBRUARY 25, 1922.

VOL. XCVI.

there were distributed in answer to coupon advertisements in the press 67,652 samples of the "Allenburys" Foods and other baby products — Rusks, Liquid Beef, Nursery Powder, Carminative, etc. These latter *associate the Pharmacy with the sale of the "Allenburys" Products.*

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is **SOLUBLE**

**WRIGHT'S LYSOL**

WRIGHT'S LYSOL positively destroys micro-organisms and thus prevents the spread of infectious diseases. The measure of its efficiency has been ascertained by analysis to be approximately  $2\frac{1}{2}$  times as great as that of pure carbolic acid.

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4/6 " "	20 "	43/2½ " "	42/1½ " "	41/0½ " "
7/6 " "	36 "	72/- " "	70/2 " "	68/4 " "

The special terms offered for orders to the value of not less than £6 net apply only when the goods are ordered in complete dozens (with a minimum of 2 dozen for the small size), except that the 7/6 size can be supplied in cartons containing either 6 or 12 tins. Goods to the value of not less than £4 net are carriage paid to the nearest Railway Station.

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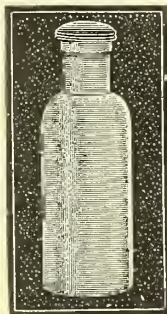


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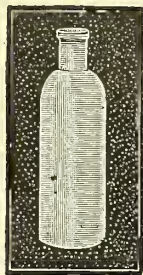
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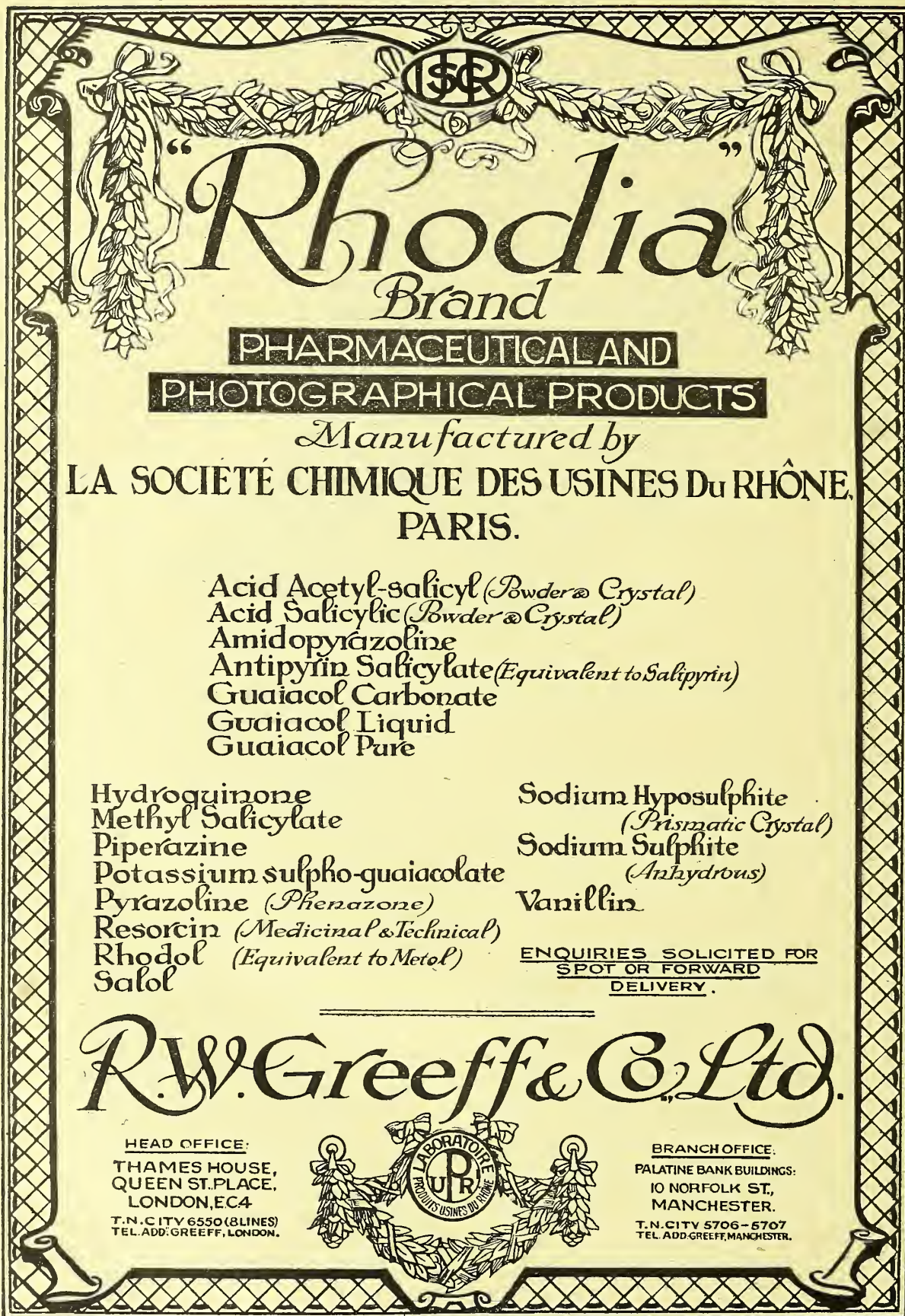
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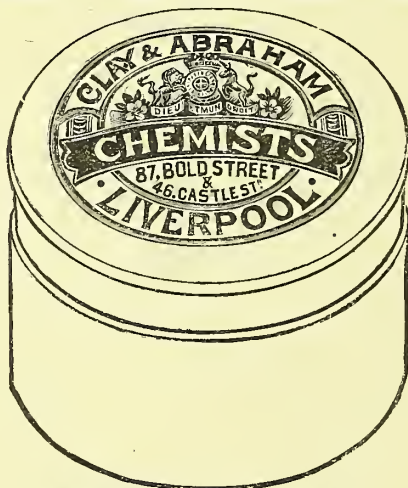
Printed in	$\frac{1}{2}$ oz.	$\frac{3}{4}$ oz.	1 oz.	$1\frac{1}{2}$ oz.	2 oz.	3 oz.	4 oz.
Black ...	42/6	50/-	56/6	65/-	73/3	105/-	112/6 grs.
Black & Gold, or	45/6	53/-	60/-	70/-	78/3	111/-	119/- "
Black and Red							
Black, Red & Gold	48/6	56/6	63/3	74/6	83/3	116/6	125/6 "

Lard is taken as the standard for the capacity of these pots.

Artistic Designs submitted for approval.

Minimum quantity  
300 Pots.

(not less than 100 of a size)



Acknowledged to be  
the Best Finished  
Pots on the Market.

### REUTER'S

Tall China Pots with Flanged Celluloid Caps.

No. 1709/DP. 173. \*

Printed in			5 grm.	10 grm.	15 grm.	20 grm.	30 grm.	50 grm.		
Black	...	...	23/-	27/-	33/-	39/3	44/3	50/-	grs.	
Black & Gold, or	}		24/6	29/3	35/6	41/-	47/6	53/6	„	
Black & Red										
Black, Red & Gold			26/-	31/9	38/-	43/6.	50/-	56/6	„	
Printed in			60 grm.	75 grm.	100 grm.	125 grm.	150 grm.	200 grm.	250 grm.	
Black	...	...	56/6	59/-	81/-	87/6	115/-	135/-	157/6	„
Black & Gold, or	}		60/6	66/9	86/-	92/6	120/-	141/-	164/6	„
Black & Red										
Black, Red & Gold			64/3	71/-	90/6	98/-	125/6	147/-	169/-	„

ALL SIZES FITTED WITH PLAIN CELLULOID CAPS KEPT IN STOCK.

SPECIAL DISCOUNTS FOR LARGE QUANTITIES.

R. J. REUTER, 69 Carter Lane, London, E.C. 4.



Maw's



Page

Feb. 25, 1922

No. 541

## A Contrast

Mr. A is just leaving your shop. He represents a firm which supplies all classes of retailers. His customers are anybody who cares to handle his firm's goods for profit. The same lines he has sold you he will probably sell to a draper or hairdresser a few doors away. He is helping to increase your competitors.

Mr. B is just entering your shop. He represents the House of Maw. His customers are qualified chemists only. His firm's goods are only supplied to recognised members of your own profession. Everything he sells you has a century and a quarter's reputation behind it, and will ensure repeat orders, the profits of which must come to you. He is helping you to restrict competition. He protects your future profits.

Mr. A's firm has an advantage over Mr. B's. Their customers are more numerous and closer together; therefore their selling expenses are lower and profits higher.

This, however, does not affect the loyalty of the House of Maw. It prefers to continue its policy of supplying the chemist only, with the assurance that the chemist will realise that his best interests are served by placing his orders with Mr. B.

*Outside competitors number at least five to one.  
Therefore you reduce competition by more than  
80% when you concentrate on the products  
of the House of Maw.*

Telephone:  
City 7  
Private  
Branch  
Exchange

Telegrams:  
Eleven  
Cent  
London

**S. Maw, Son & Sons. Ltd.**  
Aldersgate St., London.  
and Barnet.

Cables:  
Eleven  
London

Code  
A.B.C.  
4th & 5th  
Edition





# BRITISH INDUSTRIES FAIR 1922



We are exhibiting

**Peldo**  
(Patent applied for)

at Stand No. A 39

Come and examine Samples for yourself.

RETAIL PRICE

**1/6**

EACH NET  
(P.A.T.A.)

Attractive  
Window Display  
material and  
Showcards sup-  
plied. Sample  
Tubes supplied  
gratis in propor-  
tion to quantity  
ordered.



WHOLESALE  
PRICE

**13/6**

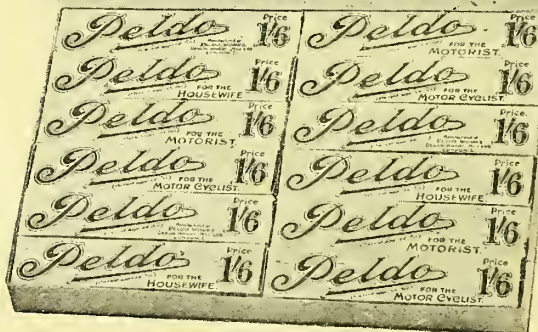
PER DOZEN

In order to introduce  
"Peldo" we are offering  
a special bonus for a  
guaranteed window dis-  
play of not less than 14  
days as follows:

On Orders of 1 gross a  
bonus of 18 full-size tubes

On Orders of 6 dozen a  
bonus of 8 full-size tubes

On Orders of 3 dozen a  
bonus of 3 full-size tubes



**C. R. HARKER, STAGG & MORGAN, LTD.**

DEVON WHARF, EMMOTT ST., MILE END, LONDON. E.I.

WHITE  
SHEPHERDS BUSH  
FEB. 27.



CITY,  
LONDON, W, 12  
MAR 10

# EVANS

## British Industries Fair. Stand No. A9

### WHITE CITY, SHEPHERD'S BUSH, FEBRUARY 27—MARCH 10.

*The following goods of our own manufacture are being shown :*

Atropin Sulphate	Ferri et Ammon. Cit.	Pot. Cit. Gran.
Algiron	Vir.	Pot. Boro. Tart.
Ammon. Benz.	Ferri et Pot. Tart.	Podophyllin
Acid Citric	Ferri Pyrophosph.	
Acid Glycerophosph.,	Ferri Phosph. Scales	Quin. Sulph.
25 %	(Sol. U.S.P.)	Quinophan
		Quin. Sal.
Barii Sulph.	Acid Hydrobrom.	Quin. Bihydrochlor.
Bismuth Salicyl.	Hydrarg. Iodid. Rub.	
Bismuth Subnit.		Sod. Glycerophosph.,
Bismuth Oxychlor.	Kava Kava Resin	50 %
Bismuth Oxid.		Sod. Cit. Pulv.
Bismuth Tribromophenol	Liquor Bismuth	Sod. Cit. Gran.
Bismuth Carb.	Lysol	Sod. Salicyl.
Bismuth Subgal.	Leptandrin	Sod. Benz.
Bismuth Cit.		Sod. Morrhuate
	Mag. Glycerophosph.	Sod. Gynocardas
Cremor Bismuth	Malourea	Scammon Resin
Caffein Cit.		
Cantharidin	Ol. Anethi.	Thymol Recryst.
Caulophyllin	Ol. Caryoph Ang.	Theobrom. Sod. Sal.
	Ol. Santal Ang.	Terebenum
Diacetyltannin		
	Pot. Glycerophosph. 50%	
Ferri et Quin. Cit.	Pot. Cit. Pulv.	Zinc Carb. Pur.
Ferri et Ammon. Cit.		

---

**EVANS SONS LESCHER & WEBB LTD.**

LIVERPOOL New York LONDON



Endorsed by  
the Medical  
Profession.

(Original shown on  
application.)



Approved by  
Eminent  
Bacteriologists.

(Original shown on  
application.)

### THE GREAT ATMOSPHERIC DISINFECTANT.

*For the Daily Disinfecting by Spraying of Offices, Banks, Factories, Institutions, Schools, and the Home.*

THE SURE PREVENTATIVE OF INFLUENZA, DIPHTHERIA, SCARLET FEVER, and other  
CONTAGIOUS DISEASES.

RETAILED AT:—

Size (o)	Containers to make	ONE	Gallon	-	6/9
" (a)	" "	TWO	"	-	12/6
" (b)	" "	THREE	"	-	17/6

COMPLETE OUTFIT consisting of Size (a) container, Sprazone Sprayer & Filter Funnel, £1 1 0

Sample Bottles sufficient to make ONE QUART of Sprazone Disinfectant at 21/- per doz.

## LIBERAL TRADE DISCOUNT

EXHIBITION AND DEMONSTRATIONS. TERMS ON APPLICATION.

Obtainable from all Chemists and Druggists' Sundriesmen.

# United Laboratories & Chemical Co. Ltd.

Registered Offices: 97 QUEEN VICTORIA STREET, LONDON, E.C. 4.

Wires:  
"UNILAB, CENT, LONDON."

Laboratories: CAUSEWAY HOUSE, S.E. 1.

Phone: CITY 4548 and 4549  
(Private Branch Exchange).

## GLASS BOTTLE MANUFACTURERS

FLATS, PANELS,  
MEXICANS, Etc.

of all descriptions and  
sizes in MEDICAL TINT.

PRICES OF FLATS in demand—

3 & 4-oz.	6 & 8-oz.	10 & 12-oz.
14/-	18/-	23/-

Other Sizes and Shapes at Proportionate Prices.

MINIMUM QUANTITY, One Gross.

F.O.R. Hull. Packages Free.

SPECIAL QUOTATIONS ON APPLICATION.

HULL BOTTLE & GLASS CO., Ltd.

"THE WORKS,"

Cumberland Street - - HULL.

## WATERGLASS

OF HIGHEST QUALITY.

Well Packed: 1 lb., 2 lb., 4 lb., 7 lb.

Customer's own name.

Showcards. Posters.

Orders for £1-10-0 Carriage Paid.

Write for Prices.

Specially Low Prices for Large Buyers.

## JOHN PARKES & CO.

Priory Works, WARWICK.



# AYRTON'S WEEKLY

PAGE 15



## TOILET ROLLS

	Per doz.	6 doz.	12 doz.
"SANITARY." A good household paper	4/6	4/3	4/-
"LOTUS" Crêpe. Coloured attractive wrapper	5/6	5/3	5/-
"No. 1 THIN." An excellent paper ; in our opinion the best value on the market, each roll containing over 600 sheets	6/6	6/3	6/-
"PINE." Same as No. 1 Thin, but impregnated with Pine odour—a real fragrant disinfectant	7/-	6/9	6/6

*We specially recommend "No. 1 Thin" and "Pine" to the attention of our friends.*

Name and address of buyer free on orders of not less than 12 dozen.  
Specimen sheets free on application.

Toilet Rolls massed in the window, on the counter, or on the floor invariably produce good results.

## AYRTON, SAUNDERS & Co. L<sup>TD</sup>

Manufacturing Chemists

Hanover Street, LIVERPOOL

Telegrams : "SUNDRIES, LIVERPOOL."

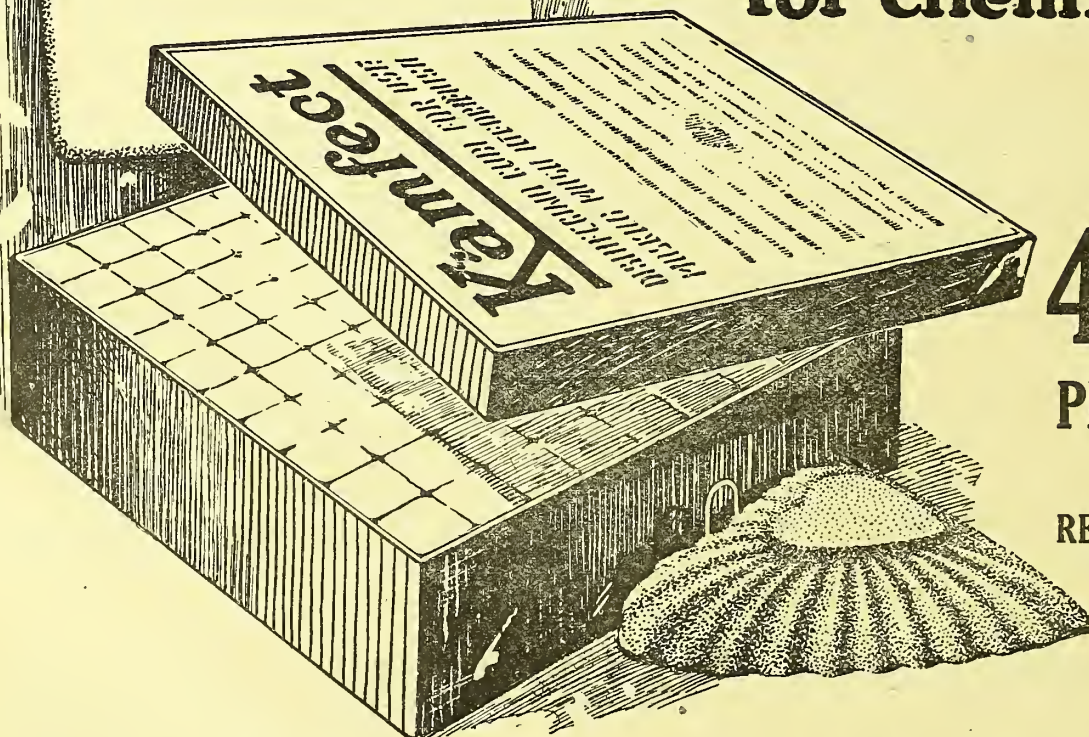


# Ka

TRADE  
MARK

AIR-PUR

**3 New  
profit lines  
for chemists**



**40%**  
**PROFIT**  
for  
**RETAILERS**

**"It's the PROFIT that makes them worth PUSHING!"**





# Kamfect

## WASHING, DISINFECTING & MOTH-KILLING PRODUCTS

Here are three lines, each with an extensive public demand which show you a really handsome profit:

**I**N announcing "Kamfect" products as a range of domestic lines with a use in every household, we would point out their profitable nature, their sale representing a margin of **40 %** for **you**.

"Kamfect" preparations are the most effective and efficient products of their kind, having **absolutely NO direct market competition**. The present "Kamfect" lines consist of—

### "Kamfect"

#### MOTH DESTROYER AND DISINFECTING TABLET

pecially prepared and compressed into conveniently shaped cake form, for use in storage cupboards, shelves, boxes, cellars, etc. *Doesn't crumble* and has a pleasant refreshing smell. Positive protection from moth and insect damage for all soft goods. White in colour.

To Retail at 3d. each.

### "Kamfect"

#### HANDY CUBES FOR BAGS, TRUNKS, ETC.

Take the place of moth balls, camphor, etc., far cheaper, more effective and lasting. Can be used wherever soft goods are stored and exposed to the ravages of moth, etc. Deadly in effect; pleasant in smell, white in colour.

To Retail at 1/9 box of 144.

### "Kamfect"

#### AIR - PURIFYING AND DEODORISING TABLET.

For use in every home, shop, school, factory, works and institution; w.c. and lavatory purposes. Maintains permanent freshness of atmosphere and is a valuable hygienic necessity. Impervious to damp; doesn't crumble and is neat in appearance. Pink in colour.

To Retail at 4½d. each.

Post slip below for FREE SAMPLES of each of the "Kamfect" lines and details of SPECIAL TRADE OFFER.

THE KAMFECT COMPANY, 5 Lauderdale Buildings, Aldersgate Street, LONDON, E.C. 1.

To KAMFECT Co.

Please send me Free Sample of Kamfect Products and details of Trade Order offer -

Name \_\_\_\_\_

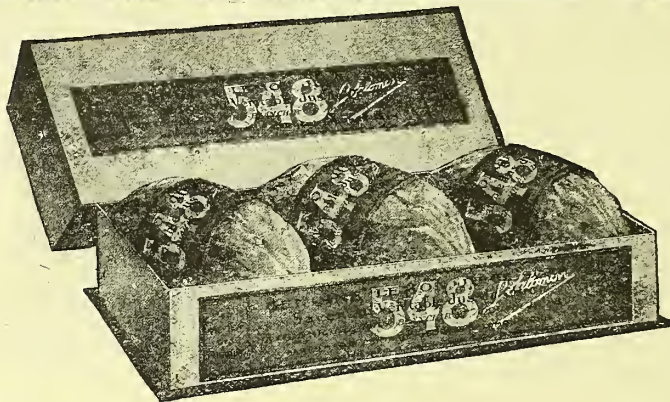
Address \_\_\_\_\_

Date \_\_\_\_\_

# THE SOAP THAT HAS COME TO STAY

MADE WITH GENUINE LEMON JUICE. NONE TO EQUAL IT.

## Salomon's French Genuine Lemon Juice Soap



□ □  
LARGE STOCKS  
HELD  
IN LONDON.  
□ □

□ □  
MANUFACTURED BY  
SALOMON FRÈRES,  
Pantin, Paris.  
□ □

In boxes of 3 tablets in each.

Attractive Showcards.

9/6 per dozen tablets.

5% Discount on 6 dozen boxes; 10% Discount on 12 dozen boxes.

Six dozen boxes or more carriage paid.

SOLE AGENTS FOR THE UNITED KINGDOM:—

**ROBERT FERBER, Limited, 98-104 Oakley Street, Lambeth, London, S.E. 1.**

### ARCHIBALD'S OATMEAL CREAM

For Summer and Winter Use.

*Soothing, Softening, Whitening. Free from Grease.*

Retails at 7½d. & 1/3 per tube.

Wholesale 5/- doz. 10/- „ doz.

Wholesale from Butler & Crispe, Sangers', May, Roberts'.

WRITE FOR SPECIAL TERMS FOR LOCAL AGENTS—

**F. E. FARMAR, M.P.S.** (late WALTON & CURTIS)

190 Broadhurst Gardens, West Hampstead, N.W. 6

Phone: Hampstead 1125.

Synthetic  
15/- oz.

**OTTO ROSE**

AS GOOD AS VIRGIN OTTO.

Write for Samples.

LEE & SILVERWOOD, 24a FOUNTAIN ROAD, HULL.

Synthetic  
7/6 oz.

**OTTO NEROLI**

AN EFFECTIVE BASE FOR EAU DE COLOGNE.

**SPONGES, LOOFAHS,  
DRUGS and CHEMICALS.**

At advantageous prices. ∴ Send for List and Samples.

**HARRISON,** Chorlton-cum-Hardy,  
MANCHESTER.

## For Something New in MOTH-KILLERS & DISINFECTANTS

*see two previous pages.*



# "ZORBO" Reg. Brand

# ABSORBENT COTTON WOOL

## Surgeons' Superfine Quality.

THIS Surgical Dressing has been introduced with a view to meeting the demand for a really high-class cotton wool of British Manufacture.

It is made only from long staple cotton, is highly absorbent, and free from all impurities, and through every stage of manufacture the greatest care has been taken, and quality has been the first and only consideration.

To ensure the retailer a reasonable profit, and to protect his customers from the substitution of inferior qualities, "ZORBO" Cotton Wool has been placed on the P.A.T.A. List, so that our friends may have every confidence in pushing this All-British line.

### SAMPLES ON APPLICATION.

### P.A.T.A. PRICES.

			1-lb.	8-oz.	4-oz.	2-oz.	1-oz.	
P.A.T.A. Public Price.	PACKETS	-	4/-	2/3	1/3	9d.	6d.	each.
Wholesale Price to Retailers	-	-	28/-	14/6	7/6	4/-	2/3	doz.
P.A.T.A. Public Price.	CARTONS	-	4/6	2/6	1/6	1/-	7½d.	each
Wholesale Price to Retailers	-	-	30/-	16/-	8/6	4/9	2/9	doz.
P.A.T.A. Public Price.	SEALED TINS,							
	STERILIZED	-	5/6	3/3	2/-	1/6	-	each.
Wholesale Price to Retailers	-	-	40/-	22/6	12/6	8/-	-	doz.

STERILIZED IN SEALED GLASS BOTTLES, 2-oz. ONLY.

P.A.T.A. Public Price	-	-	-	1/9	each.
Wholesale Price to Retailers	-	-	-	10/-	per doz.

SOLE MANUFACTURERS:

## ROBERT BAILEY & SON, LTD.

London Address : 49-51 Central Street, E.C. 1.

ORDER THROUGH YOUR USUAL WHOLESALE.

# STILL ON TOP!!

## EDWARDS' HARLENE

### TOILET SPECIALITIES

#### THE WORLD'S BEST SELLERS



"HARLENE"  
FOR THE HAIR

"UZON"  
BRILLIANTINE

"CREMEX"  
SHAMPOO POWDERS

"ASTOL"  
FOR GREY HAIR

"ASTINE"  
VANISHING CREAM

"ASTINE"  
TOOTH CREAM

"ASTINE"  
SHAVING STICK

"ASTINE"  
NAIL CREAM

**SUPPORTED BY WIDESPREAD PUBLICITY  
WHICH BRINGS YOU NEW CUSTOMERS DAILY**

**BE ABREAST OF THE TIMES.**

**FOLLOW THE TIDE OF SUCCESS.**

Watch the Great Free Gift Advertising Campaign that brings the Customers to YOUR Shop.

*No Chemist or Store can afford to be without this unique line of Toilet Preparations.*

*For Particulars, Terms, etc., write to*

**EDWARDS' HARLENE, LIMITED**

20, 22, 24 & 26 LAMB'S CONDUIT STREET, LONDON, W.C. 1.





*A well-known Dentist writes :*

"I am convinced that  
**EUCRYL DENTURE POWDER**  
will command a ready sale and I shall  
have pleasure in recommending it to my  
patients."

# EUCRYL DENTURE POWDER

is a scientific preparation possessing not only detergent qualities but acting as a perfect cleanser and solvent.

It deals effectively with deposits of decaying matter left from food and removes carbonisation due to smoking.

It is a strong germicide and leaves the plate wholesome and sterile, whilst continued use will not injure either teeth or plates.

## IN DAINTY DISPLAY BOXES

Retail (P.A.T.A.) Price **7½d.**

**SEND FOR FREE BOX**  
and **PARTICULARS of BONUS TERMS.**

**EUCRYL LIMITED,**  
**SHIRLEY, SOUTHAMPTON.**



**DE LUZY**  
*Parfumeur*  
**PARIS**



Preliminary Announcement  
of an  
**ADVERTISING  
CAMPAIGN**

We consider the time now ripe to actively advertise De Luzy preparations. We have instructed a firm of first-class advertising agents, and the campaign will be launched in a few weeks. It will include a Cash Prize Competition for Chemists, Managers, Assistants and Public.

.....  
Write to-day and register  
your name for details.  
.....

**DE LUZY**

(London Office)

3 London Wall Avenue, E.C. 2

W. H. CALNAN, General Manager

Telephone: Wall 9966

**HIGHEST GRADE  
AUSTRALIAN  
SANDALWOOD OIL**

GUARANTEED NOT UNDER

**90%**

**OPTICAL ACTIVITY**

-6° to -10°

*Recent Analysis:*

Alcohols (as Santalol) 91.3 %  
Ester Santalol ... 3.2 %

Accepted by Australian  
Medical authorities as equal  
to B.P. Oil for medicinal  
purposes.

*Distilled by*

**PLAIMAR LTD., PERTH,  
West Australia.**

*Agents for United Kingdom  
and Europe:*

**PLAISTOWE & CO., LTD.  
King's Cross, London, N.1**

**J. R. BOURLAT, GOES & CO.**

*Powder Puffs Manufacturers,*  
22 PRINCE'S RD., HOLLAND PARK, W. 11  
*Phone :: :: Park 2592.*

We have now removed to more commodious premises at the above address, and our workrooms being fitted for mass production, we can guarantee delivery of any orders in a minimum of time, consistent with good finish.

We are not exposing any of our Powder Puffs at the British Industries Fair, but being only a stone's throw from the "WHITE CITY," intending buyers would be well advised to pay us a visit and inspect our wide range of new creations for the coming spring season.

Our new price list, which is given free to any Wholesaler or Shipper, might also prove to be invaluable in comparing prices of our competitors.

Export and all enquiries welcomed and promptly attended to.

**DELIVERIES FROM STOCK.**

OINTMENT POTS. :: DROP BOTTLES.  
CORN SOLVENT BOTTLES. EYE BATHS.  
CACHETS AND CLOSING MACHINES.  
EYE SHADES. :: FINGER STALLS.  
RUBBER GOODS. CELLULOID GOODS.  
HOUSEHOLD THERMOMETERS.

**G. HEISER,**

The Telma Mfg. Co.,

182 Kingsland Road, LONDON, E. 2.





# There's going to be a Big Demand!

**ARE** you ready for the demand which will follow the Héra Advertising Campaign? If not, let us fix you up now.

Héra is going to mean a lot to you. They are quality goods at competitive prices, well advertised, showing you good profits.

Every help will be given to increase and stabilise sales.

There is a wide range of Héra Products, too full to enumerate here—all information will be despatched on application.

Be among the first to profit by the Héra Advertising Campaign—get in touch with us now. There's profit and prestige in Héra for you.

Write now to—

**WALTER E. STOKES & CO.**

8 Woodstock Street, Oxford Street, LONDON, W.1

Phone—Mayfair 4481.

Grams—

"Stokes, London, Mayfair 4481."





# DEARBORN

LIMITED

37 Gray's Inn Road, LONDON, W.C.

## Toilet Specialities.

	Price per doz. to Retailer.	Selling Price P.A.T.A.
<b>PILENTA SOAP</b> . . . . .	10/-	1/-
A complexion soap.		
<b>PROLACTUM</b> . . . . .	10/-	1/-
For the lips.		
<b>PARSIDIUM JELLY</b> . . . . .	10/-	1/-
For wrinkles.		
<b>ALLACITE of ORANGE</b> . . . . .	22/6	2/6
A dressing cream. <b>BLOSSOM</b>		
<b>BORANIUM</b> . . . . .	22/6	2/6
A hair tonic.		
<b>SILMERINE</b> . . . . .	22/6	2/6
Hair curling fluid.		
<b>CLEMINITE</b> . . . . .	22/6	2/6
For a face lotion.		
<b>COLLIANDUM</b> . . . . .	22/6	2/6
For a face tint.		
<b>PERGOL</b> . . . . .	22/6	2/6
A deodorant.		
<b>STALLAX</b> . . . . .	22/6	2/6
For a shampoo.		
<b>JETTALINE</b> . . . . .	31/6	3/6
For clearing the skin.		
<b>PHEMINOL</b> . . . . .	36/-	4/-
A depilatory.		
<b>TEKKO PASTE</b> . . . . .	22/6	2/6
Camphor cream.		
<b>MENNALINE</b> . . . . .	36/-	4/-
For the eyelashes.		
<b>MERCOLIZED WAX</b> . . . . .	31/6	3/6
A face cream.		
<b>STYMOL</b> . . . . .	36/-	4/-
For oily complexions and blackheads.		
<b>BARSYDE</b> . . . . .	22/6	2/6
Dandruff eradicator.		
<b>TAMMALITE</b> . . . . .	22/6	2/6
For grey or faded hair.		
<b>LIQUID PERGOL</b> . . . . .	31/6	3/6
To check excessive perspiration locally.		
<b>BICROLIUM</b> . . . . .	22/6	2/6
For whitening the hands.		
<b>COCONOIDS</b> . . . . .	31/6	3/6
For figure development.		
<b>HARAPOSA</b> . . . . .	22/6	2/6
Nut oil shampoo.		

STOCKED BY ALL WHOLESALE HOUSES

### COLONIAL DEPOTS AND AGENCIES:

#### AUSTRALIA:

ALL WHOLESALE, and  
DEARBORN, Ltd., Grace House, Clarence Street, Sydney.

#### SOUTH AFRICA:

LENNON, Ltd.  
SIVE BROS. & KARNOVSKY, Ltd. (Johannesburg):

#### INDIA:

KEMP & CO., Ltd. (Bombay).  
THE INTERNATIONAL TRADING CO., Princess Street (Bombay).  
R. MACLURE (Madras).  
SMITH, STANISTREET & CO. (Calcutta).  
MEHTA BROS. (Calcutta).  
JAMNADAS BROS. (Bombay).

#### NEW ZEALAND:

SHARLAND & CO., Ltd. (Auckland & Wellington).

#### SOUTH AMERICA:

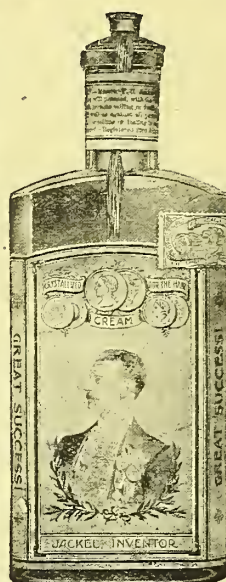
DEARBORN, Ltd., Calla Salta 264, Buenos Aires.

# "Jackel's Cream"

(without Grease)  
for THE HAIR

Sold everywhere

Established 1883.



CRYSTALLISED  
1/9 CREAM 2/6  
Trade Mark attached to each  
bottle.

"Jackel's Cream"  
fixes the hair in any de-  
sired position; is un-  
excelled as a dressing  
and does not soil the  
headwear. It removes  
Scurf and Dandruff,  
keeps the scalp healthy,  
and promotes the natu-  
ral growth of the hair  
while maintaining its  
softness and brilliancy.

Prices for Wholesale and Export  
Houses on application.

Jackel et Cie (of Paris)  
Ltd.,  
Sauchiehall Street,  
GLASGOW.

# "Newbery's"

FRANCIS NEWBERY & SONS LTD.

## COMPLETE RANGE OF

Packed Pharmaceuticals,  
Toilet Preparations,  
"Own Name" Packed Goods.

## SUNDRIES—

Best British Tooth Brushes,  
Hair Brushes, and Shaving  
Brushes. Mirrors,  
Manicure Requisites, etc.

FRANCIS NEWBERY  
& Sons, Ltd.  
LONDON & CARDIFF.



Advertised to 10,000,000 Persons !

# SILKODONO

for the HAIR & SCALP

100,000 FREE SAMPLES.

A great New Advertising Campaign to the public is now in full swing. 10,000,000 persons are being appealed to through the *Daily Mail*, *Daily Mirror*, *Daily Sketch*, *Daily Chronicle*, *Daily Express*, *Sunday Pictorial*, *Sunday Express*, *News of the World*, *People*, *Reynolds'*, *Weekly Dispatch*, and leading weekly and monthly publications.

100,000 Samples are being distributed FREE. This means big business—huge profits—waiting for YOU to snap up ! Don't turn this business away—take advantage of it yourself ; get ready with a stock of SILKODONO to meet the ever-increasing demand.

**SILKODONO**  
for the HAIR & SCALP  
*The Magic Hair Remedy*

PRICE 1/6, 2/6 & 4/6 PER BOTTLE

YOUR HAIR IS YOUR CHIEF CHARM OR WORST ENEMY PRESERVE IT WITH SILKODONO

## This Beautiful Showcard

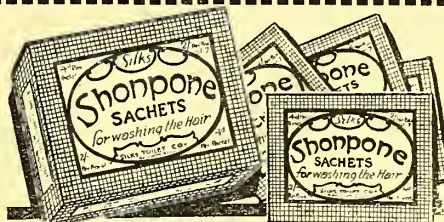
**FREE**

You can make splendid displays by means of dummy Silkodonon Cartons and the magnificent showcard (printed in 16 lovely colours) which—together with other Silkodonon Showcards—will be sent FREE on request.

## SPECIAL BONUS TERMS

during the Advertising Campaign.

1/6 size	4/6 size
Wholesale price 12/- doz:	Wholesale price 36/- doz.
6 bottles or 3 doz. Shonpone Sachets extra with orders for 3 doz. Net Profit 27/- on outlay of 36/-	6 bottles or 10 doz. Shonpone Sachets extra with orders for 3 doz. Net profit 81/- on outlay of 108/-
2/6 size	
Wholesale price 20/- doz:	Provincial orders for 3 doz. and upwards carriage paid.
6 bottles or 6 doz. Shonpone Sachets extra with orders for 3 doz. Net profit 45/- on outlay of 60/-	Orders for 1 doz. or less carriage forward.



## HOW SHONPONE SACHETS HELP

To every applicant for a FREE SAMPLE of SILKODONO we also forward FREE a large 4d. SHONPONE SACHET for washing the Hair. This distribution of Shonpone Shampoo Sachets helps to induce applications for samples of Silkodonon. Price per doz. 2/6 with order for 3 doz., 6 extra Free and postage paid.



All London Orders speedily executed by our own Motors.



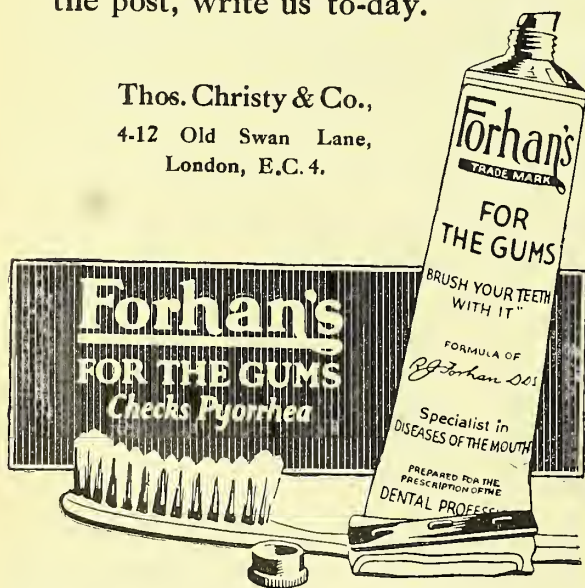
# FORHAN'S Free Goods Offer IS STILL OPEN

To answer the local response to Forhan's broadcast advertising, you need a supply of Forhan's For the Gums—the dentifrice professionally recommended as a protection against Pyorrhea, and which at the same time is a delightful purifier, preserver and beautifier of the teeth.

There is a hard cash benefit to you in ordering now. For a short period we are offering free saleable supplies of Forhan's, the amount varying with that of your order. Every penny of their retail price goes into your pocket. In return, we ask you only to display Forhan's prominently in your window for a short time.

If you have not received full particulars of our offer through the post, write us to-day.

Thos. Christy & Co.,  
4-12 Old Swan Lane,  
London, E.C. 4.



## LINES THAT SHOW GOOD PROFITS



### Taylor's CIMOLITE PREPARATIONS

50 YEARS' REPUTATION.

Used in all Royal Nurseries and by the Nobility.

#### CIMOLITE TOILET POWDER.

Boxes, 1/12 (per doz. 9/6)  
Tins, 3/-, 5/6, 11/- (per doz.  
27/-, 49/3, 96/-)  
Bottles, 3/3, 6/6 (per doz.  
30/-, 55/6)

#### CIMOLITE TOILET CREAM.

Collapsible tubes, 1/3 (per  
doz. 11/6)

#### CIMOLITE SOAP.

Per tablet, 8d.; per box 2/-  
(per doz. 3 tab. boxes, 20/-)

#### CIMOLITE FACE POWDER.

Boxes, 1/12 (per doz. 9/6)  
Tins, 3/- (per doz. 27/-)  
Bottles, 3/3 (per doz. 30/-)

#### CIMOLITE SOAP (Violet-Scented)

Per tablet, 8d.; per box, 2/-  
(per doz. 3-tab. boxes, 20/-)

#### CIMOLITE SHAVING SOAP.

Sticks, 1/3 (per doz., 11/6)

SHOW CARDS and Counter  
Bills on application.

NOW  
ON  
THE  
P.A.T.A.



Cimolite Prepara-  
tions are stocked  
by all wholesale  
houses.

ATTRACTIVE SHOW CARD obtainable from  
all wholesalers or direct.

PREPARED ONLY BY

JOHN TAYLOR, Manufacturing Chemist  
30 BAKER STREET, PORTMAN SQ., LONDON, W. 1

100%  
PROFIT ON

**ALZA**

TOILET  
SPECIALITIES

Vanishing Cream, Hair Fixer, Henna  
Shampoo, Toilet Soap, Solid Brilliantine  
Cologne, Emulsified Coconut Oil.

Send for LIST and QUOTATIONS to

ALZA MFG. CO. Choriton-cum-Hardy MANCHESTER

**F. W. OLDER,** 37 WALBROOK,  
E.C. 4.

Successor to HERBERT M. LONGCROFT & CO., Ltd.

**CAPPING SKINS**

OF ALL KINDS.

AMPOULES

BOTTLES

SPRINKLERS

CLINICALS

HYPODERMICS

THERMOMETERS

BRUSHES

DRUGGISTS' SUNDRIES.

Tel. No.: City 7637.

ART OF DISPENSING. (9th Edit.) 8/-, by post 8/9.  
VETERINARY COUNTER PRACTICE.

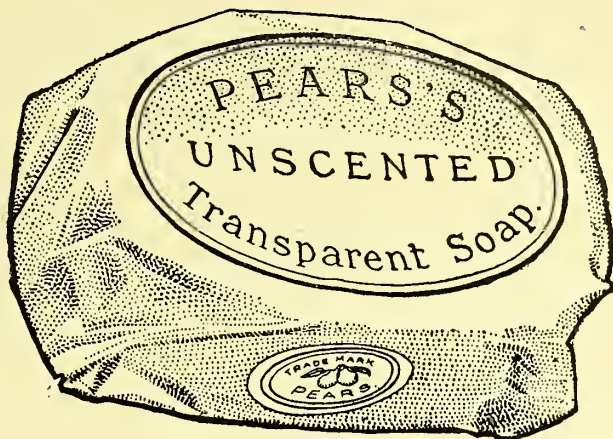
7/6, by post 8/3.

CHEMIST'S DICTIONARY OF MEDICAL TERMS.

3/6, by post 3/10.

The CHEMIST & DRUGGIST, 42 Cannon Street, E.C. 4





*The combination of good goods  
and good advertising is  
irresistible. Good trade follows  
as a matter of course.*

*Pears*

*offer you this combination.*

A. & F. Pears, Ltd., 71-75, New Oxford Street, London, W.C. 1

# *Poudre Nildé*

## in the sifter box

### *A big return—for a small effort.*

**P**OUFRE NILDÉ is already half-sold when it reaches your shelves. Recommendations and persistent advertising send you customers. Display Poudre Nildé in your window and on your counter, and you get additional customers for yourselves.

Poudre Nildé is a steady seller. With a little "pushing" it becomes a steady and *quick* seller.

And Poudre Nildé is well worth "pushing." It gives you a generous return for your efforts— $33\frac{1}{3}\%$  on the selling price. It increases your turnover all round. And it builds up goodwill for you.

*Made in six shades—Rachel, Naturelle, Blanche, Rose, Basanée, and Indienne.*

Handbag size, 1/-; medium, 2/-; large, 3/6

Leather or fancy embroidered Vanity Cases with mirror in lid.

Small size, 5/-; medium, 7/6; large, 10/-.

**All Nildé preparations show  
 $33\frac{1}{3}\%$  profit on selling price.**

## **NILDÉ, Paris.**

*British & Colonial Agents:*

**8 BLENHEIM ST.,  
LONDON, W.1**



**EACH BOX  
CONTAINS  
A PUFF.**



# Crème de Beauté Nildé

Gives you a profit of  $33\frac{1}{3}\%$  on the selling price.

A NEAT jar of delicately perfumed cream in an attractive package.

The steadily increasing sales are the best indication of its quality. And on every sale you get a profit of  $33\frac{1}{3}\%$  on the selling price.

A prominent display of Nildé preparations will repay you many times

over. The name Nildé is so well known that the constant reminder in your window, backed up by the continuous advertising, will get new customers for you.

And these customers will buy not only Nildé preparations, but other goods as well.

## CRÈME DE BEAUTÉ NILDÉ

Blanche or  
Naturelle, 2/-

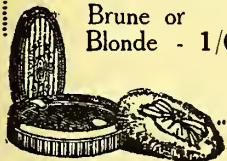
Large size, 3/-



## OTHER NILDÉ PREPARATIONS

### ROUGE INVISIBLE NILDÉ.

In the sifter  
box with puff  
Brune or  
Blonde - 1/6



### SAVON NILDÉ

The creamy lather  
Soap - - Price 1/-

Cartons containing  
3 tablets - - - 3/-

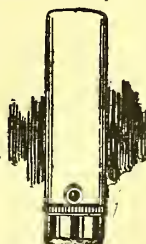


### NILDÉ LIP SALVES

In elegant metal  
containers.

White - 9d.

Rouge or  
Carminé 1/-



# NILDÉ, Paris.

British and Colonial Agents:

8 BLENHEIM ST., LONDON, W.1.

# Druggists' Sundries

## SPECIAL BARGAINS LADIES' DRESSING COMBS.

No.		ins.	per doz.	No.		ins.	per doz.
103	Black celluloid	$7\frac{1}{2} \times 1\frac{1}{2}$	6 6	118	Black vulcanite, burr grailed	$8 \times 1\frac{1}{2}$	10 0
171	White	$7\frac{1}{2} \times 1\frac{1}{2}$	6 6	116	Shell celluloid	$7\frac{1}{2} \times 1\frac{1}{2}$	8 6
102	Black	$8 \times 1\frac{1}{2}$	7 6	195	Black vulcanite, stout	$8 \times 1\frac{1}{2}$	12 6
121	" burr grailed	$7\frac{1}{2} \times 1\frac{1}{2}$	7 6	228	Horn, stout	$8 \times 1\frac{1}{2}$	18 0

### LADIES' RAKE COMBS.

No.		ins.	per doz.
224	White celluloid	$8 \times 1\frac{1}{2}$	8 0
119	Black burr grailed	$8 \times 1\frac{1}{2}$	10 6
196	Black vulcanite	$8 \times 1\frac{1}{2}$	12 6
117	White celluloid	$7\frac{1}{2} \times 1\frac{1}{2}$	15 0

### GENTS' COMBS.

No.		ins.	per doz.
165	Black celluloid	$6\frac{1}{2} \times \frac{3}{4}$	6 0
140	White	$7 \times 1$	7 6
143	Black vulcanite, stout	$7 \times 1$	7 6
291	Horn	$6\frac{1}{2} \times \frac{3}{4}$	8 0
241	"	$6\frac{1}{2} \times 1$	9 0
309	White galalith	$6\frac{1}{2} \times 1$	9 0

### LADIES' HANDLE COMBS.

No.		ins.	per doz.
104	Black celluloid, burr grailed	$8 \times 1$	10 6
105	White	$8 \times 1$	10 6
216	Black vulcanite	$8\frac{1}{2} \times 1\frac{1}{2}$	24 0

### SMALL TOOTH COMBS.

No.		ins.	per doz.
250	White galalith	$3 \times 1\frac{3}{4}$	3 0
239	" celluloid	$3 \times 1\frac{3}{4}$	4 6
232	Black	$3\frac{1}{2} \times 2$	5 6
176	White galalith	$3\frac{1}{2} \times 2$	6 6
177	Blonde galalith, extra fine teeth	$3\frac{1}{2} \times 2$	6 6
192	Black vulcanite, grooved	$3 \times 1\frac{3}{4}$	5 0
202	"	$3\frac{1}{2} \times 2$	7 6

A discount of 5% for prompt cash is allowed on all amounts of 10/- and upwards. Money returned if goods are not satisfactory. Write for illustrated price lists, post free for the asking.

**BURGE, WARREN & RIDGLEY, LTD.**  
91 & 92 GREAT SAFFRON HILL LONDON, E.C. 1.

REDUCED  
PRICE



**3/3 PER DOZEN.**

## MIRROR NAIL STONES

IN THE ORIGINAL  
HINGED ALUMINIUM BOXES  
IN SHOW BOXES OF 1 DOZEN.

Stocked by ALL LEADING WHOLESALERS.

MADE ONLY BY  
**SOLPORT BROTHERS, Ltd.**  
184-190 Goswell Road,  
LONDON - E.C. 1

# BIDWELLS

Factories: AXMINSTER, DEVON.

London—6 East India Avenue, E.C. 3.

## WE OFFER



Half-dozen each of 9 patterns, £2 9 6.  
Sell readily for £4 19 0.



*A Famous Member  
of a Distinguished Family*



TRADE **Vaseline** MARK  
**CARBOLATED**  
PETROLEUM JELLY

**SALES** are easy when you offer "VASELINE CARBOLATED" to your customers. There is no barrier or prejudice to break down—no questions to answer as to its purity, suitability or efficacy.

"VASELINE CARBOLATED" is entirely homogeneous in texture. The Vaseline petroleum jelly is supplied with the carbolic acid absorbed—uniformly absorbed to the stated percentage so that there are no neat particles of acid.

VASELINE PRODUCTS are extensively advertised throughout the year in the leading and most widely circulated magazines and periodicals. Combined with the great popularity of these goods on the score of utility, this advertising makes for steady sales day in and day out.

"VASELINE CARBOLATED" particularly is to be featured during the months of APRIL, MAY, and JUNE.

**CHESEBROUGH Mfg. Co., Consd.**  
42 HOLBORN VIADUCT  
LONDON, E.C.1.

*for*  
**WOUNDS  
BURNS  
BRUISES**

**CUTS  
SORES  
ETC..**





Specify when ordering:—

"ENGLISH PROPHYLACTIC"

**"ADDIS in  
the Blue Box"**

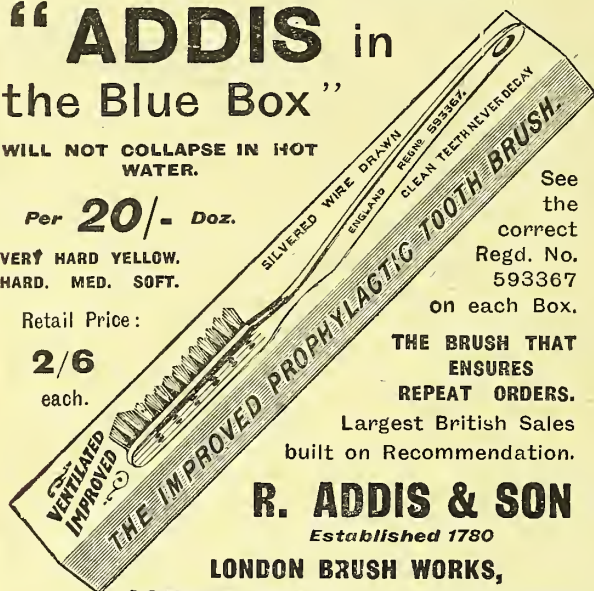
WILL NOT COLLAPSE IN HOT  
WATER.

Per **20/-** Doz.

VERY HARD YELLOW.  
HARD. MED. SOFT.

Retail Price:

**2/6**  
each.



See  
the  
correct  
Regd. No.  
593367  
on each Box.

**THE BRUSH THAT  
ENSURES  
REPEAT ORDERS.**

Largest British Sales  
built on Recommendation.

**R. ADDIS & SON**  
Established 1780

**LONDON BRUSH WORKS,  
LONDON FIELDS and HERTFORD.**

**OLDEST FIRM OF TOOTH BRUSH MANUFACTURERS  
IN THE WORLD.**

Sold by the following Wholesale Druggists:—

**LONDON.**

Amor, W. W., Son & Co.  
Barclay & Sons, Ltd.  
Butler & Crispe  
Baiss Bros. & Co.

Bourne, Johnson &  
Co., Ltd.  
Dakin Bros., Ltd.  
Edwards, W., & Son  
Ferber, Robt., Ltd.  
Galen Manufacturing  
Co. Ltd.  
Hewlett, C. J., & Son,  
Ltd.

Hay, J. B., & Co.  
Higgins, G., & Co.  
Hovenden, R., & Sons  
May, Roberts & Co.  
Newbery, F., & Sons,  
Ltd.  
Osborne, Garratt &  
Co., Ltd.  
Rippling, J.  
Reuter, R. J.  
Sangers  
Schutze, F., & Co.,  
Ltd.  
Sutton, W., & Co.  
Taffs, H. F., & Co.

**BIRMINGHAM.**

Parton, Son & Co.,  
Ltd.  
Southall Bros. &  
Barclay

**CARDIFF.**

Newbery, F., & Sons  
Ltd.

**GLASGOW.**

Burns, Petrie & Co.  
Lorimer & Moyes Ltd.  
Munro, M' Laren &  
Sutherland

**LIVERPOOL.**

Ayrton, Saunders &  
Co., Ltd.

**MANCHESTER.**

Harper, C. W.  
Harrison, Chas., &  
Sons  
Heath Bros.  
Quilliam, J., & Co.,  
Ltd.  
Woolley, Sons & Co.

**NEWCASTLE.**

Hall, Forster & Co.,  
Ltd.



**NITS**

**BINNS'S "Silver"  
NIT Comb (Unrivalled)**

Equally useful for removing  
NITS from the hair or as a  
Dust Comb for grown-ups.

The Comb of the moment for  
School Medical Inspection work.

Send for particulars to the Sole Maker.

Always look for this black on  
box containing Comb.  
NO COMB GENUINE WITHOUT IT.

**GEO. A. BINNS, Archer St. Mills, HALIFAX.**  
SUPPORT BRITISH INDUSTRY. (The only address.)

**It cannot stop!**



The demand for Anzora Cream,  
Anzora Viola, and Anzora  
Vanishing Cream is so insistent  
that in order to meet it the stock  
cannot be held—it just passes  
through the storerooms. Is it  
included in your stock? If not,  
get going to-day.



TRADE TERMS 12/-, 20/- per doz. Retail at 18/-, 30/-

**ANZORA**

**MASTERS THE HAIR**

Anzora Perfumery Co., Ltd., Willesden Lane, N.W.6

**THE EVAN WILLIAMS'**  
**EMULSIFIED COCOANUT OIL SHAMPOOS**  
*in liquid form (2 sizes) in powder form (packets)*

They are well up to the Evan Williams' standard of production, sell freely, and give a handsome profit.

Write for "The Shampoo Salesman," which gives full details of all our Preparations.

**THE EVAN WILLIAMS CO., LTD., 18 & 18a Ogle Street, LONDON, W.1.**

*The largest Shampoo Specialists in the world.*



Question :*Where is it possible to obtain better value in***SPONGES***than at Marcuson's ?*Answer :*Nowhere.*

MARCUSON BROS. &amp; CO.,

**SPONGE**IMPORTERS, EXPORTERS, MERCHANTS.  
32 MINORIES :: :: LONDON, E.1.

Phone : Avenue 840.

Wires : "Pantalara, Ald, London."

NO CONNECTION WITH ANY OTHER FIRM.

**TUSKOID**

Superfine Cut—Non-Inflammable.

Fine Tooth Combs.

8/- 10/- 12/- per dozen.

Glass-fronted Showcase free with 3 dozen Combs,  
£1 10 0**MAZEPPA****ENGLISH MADE TOOTH BRUSHES**

Transparent. Three Colours.

4 Row, Best Bristles ... 11/6 doz.  
3 Row, Children's... ... 8/- doz.**GENUINE IVORY****FOLDING POCKET MANICURES**Containing Nail File, Toothpick and Cuticle Spoon.  
8/- doz. carded.**BONE NAIL FILES**

Assorted sizes. 1 doz. on card. 3/- per card.

**H. J. LEE & CO.**

Osborne Works, LANCASTER.

**SPONGES**

DEAL DIRECT WITH

**IMPORTERS**

AND THUS SAVE

**Intermediate Profits**

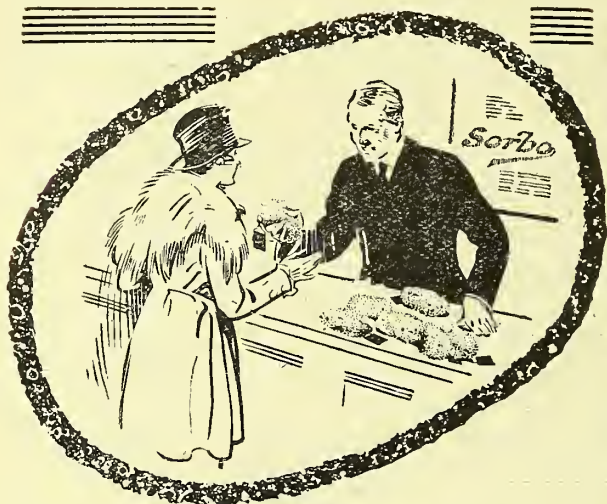
LARGE STOCKS OF—

**HONEYCOMB, BROWN  
AND WHITE TURKEY,  
ALSO ELEPHANTS'  
EARS for immediate delivery.**

Write for Illustrated Brochure to—

**CHIAPAS, Soc. Anon.,**  
32 Queen Victoria St., LONDON, E.C. 4  
Tel. No.: City 5824.

RELIABLE AGENT REQUIRED for SCOTLAND



## Steady Profits Week in, week out

THERE is an established demand for Sorbo Sponges—you can rely on it. The very low price of this all-British rubber sponge, its novelty and fine quality make it an exceptionally easy seller. And the hygienic airproof transparent envelope in which each sponge is packed ensures that it keeps in perfect condition. You run no risk in carrying a good stock of Sorbo Sponges, and you are certain to make money.

*Send your order early.*

See the Sorbo Sponge Exhibit at the  
**BRITISH INDUSTRIES FAIR**  
STANDS No. A 71 & 72.

FEBRUARY 27th — MARCH 10th

# SorboSponge

THE MOST ABSORBENT RUBBER SPONGE

Retail Prices : No. 1, 1/3 ; No. 2, 2/- ;  
No. 3, 3/- ; No. 4, 5/- ; Bath Sizes :  
No. 4R, 7/6 ; No. 5, 10/6.

**SORBO RUBBER-SPONGE  
PRODUCTS LTD.**

24 WALBROOK, LONDON, E.C. 4.

Telephone : CITY 9372. Telegrams : " OSORBEAU LONDON."

Daily we open many  
new accounts.

Daily our repetition  
orders increase for



GUARANTEED

## SHAVING BRUSHES

A range of over 100 "Better  
Brushes" retailing from 2/3 to  
63/- each. Booklets, Showcards  
and monster window trims with  
all orders.

.....  
THIS SHOWCARD  
HAS TEMPTED  
BUSINESS FROM  
THOUSANDS OF  
MEN

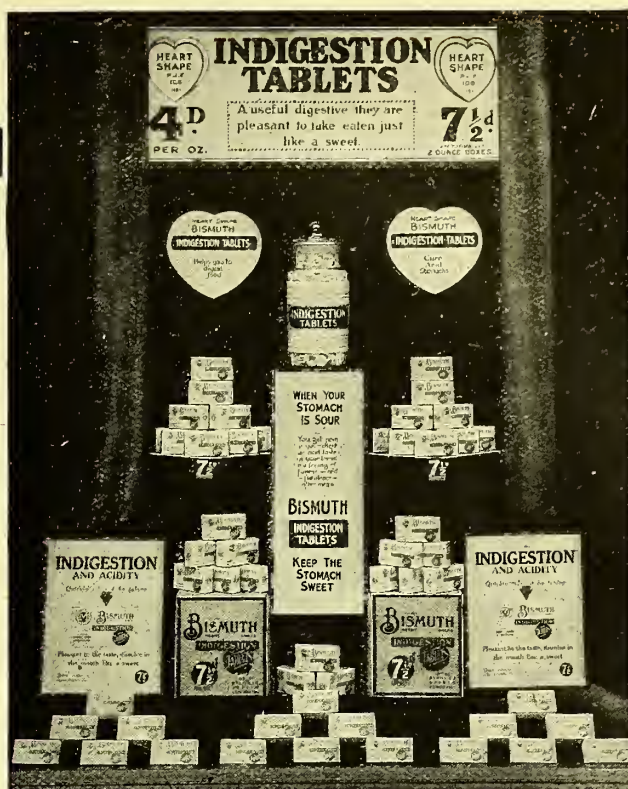


WRITE TO-DAY FOR  
ILLUSTRATED LIST.

.....  
W. H. CALNAN & Co., Ltd.  
30-32 LUDGATE HILL, E.C. 4.



# The Big Demand Continues



**T**HE sales for these Indigestion Tablets are now really tremendous, and growing every day, too.

Ours is the original Heart-shaped Indigestion Tablet which is such a splendid

seller, and so well known to the public all over.

We strongly recommend you to make a window display at frequent intervals.

The formula is a good one, and is excellent for the purpose for which THE TABLETS are sold—Indigestion and Stomach troubles, Flatulence, etc.

*The full window display as illustrated, minus the jar and ribbon, is sent to you quite free with an order for 56 lb. or over. 400 Cartons supplied free with 1 cwt. Smaller quantities pro rata.*

56 lb. 1/10 lb. ; 1 cwt. 1/9 lb. ; Fixed Retail Price 7½d.

London :

37 RED LION ST.,  
HIGH HOLBORN.

Tel.: Chancery 7416.

**W.B. CARTWRIGHT LTD.**  
RAWDON LEEDS  
*Australia.* 257-259 CASTLEBROUGH ST. SYDNEY  
225, FLINDERS LANE, MELBOURNE.  
*New Zealand.* 101, HERFORD ST. CHRISTCHURCH  
CORNER ALBERT & DURHAM ST. AUCKLAND

Glasgow :

BATH CHAMBERS,  
65 BATH STREET.

Tel.: Douglas 459.

## Moorland Pharmacy Service



For the pharmacist who prefers a settled margin of profit we have produced a most attractive line

### "GOLD MEDAL"

## Cream Emulsion of Cod Liver Oil (33 per cent. C.L.O.)

with Hypophosphites, which is on the P.A.T.A. List in the following sizes and prices:—

Size.	Retail.	The wholesale prices ensure a profit of <b>33%</b> or more on turnover.
6 oz.	1/9 each	
12 "	3/- "	
24 "	5/- "	

The photographic reproduction above gives some idea of the tasteful get-up, but the purple and gold label and the handsome red, gold and white cut-out showcard need to be seen to be appreciated, and will make this Emulsion sell at sight.

For those who prefer an Emulsion to sell under their own name, we offer choice of seven designs at competitive prices, printing the pharmacist's name and address free.

**WRITE FOR FULL PARTICULARS.**

We were awarded the unique distinction of GOLD MEDAL, the only award for Emulsion, at the last International Congress of Medicine, London.

## BAISS BROTHERS & COMPANY, LTD.

*Wholesale Druggists and Manufacturing Chemists,*

**174-176 Grange Road, Bermondsey,  
LONDON, S.E. 1.**



ESTABLISHED 1880.

We invite enquiry for the following:

### CONCENTRATED TINCTURES

Our name has been associated with the manufacture of Concentrations for forty years, and it is with the utmost confidence we offer these preparations to Houses abroad. These Concentrated Tinctures occupy but little bulk, while the saving of freight, duty, and charges is, of course, considerable.

### CHAULMUGRA OIL.—*Fine Pale, Genuine*

We are about the oldest importers of the oil in this country. Cases of 2×40-lb. tins free.

### ZINC OXIDE (“*Puriss*”)

The *finest and lightest Zinc made*, exceptionally light, *twice sublimed*; and in a fine snow-white impalpable powder, testing 99·8%. This is a much higher degree of purity than is usually claimed for a product made on a commercial scale, and a much greater percentage than that given for other leading brands.

### “LYSOL”—“*Eklips*” Brand

A LYSOL of British manufacture and absolutely equal in strength and efficiency to the German product. Prices have been considerably reduced.

### COD LIVER OIL EMULSION, 33%

The “4 Medals” Brand, made from the finest Lofoten Oil, by the latest and most powerful machinery, is a White, Creamy, Inseparable Emulsion. “Has all the characters of a well-made Emulsion.”

*Chemist and Druggist.*

### PARRISH'S SYRUP.

Made from white Cane Sugar and purest Phosphoric Acid by an original process, this Syrup is free from silica and any “inky” taste.

## H. E. STEVENSON & CO.

LICENSED COMPOUNDERS OF TINCTURES, ESSENCES, PERFUMES, &c., FOR SHIPMENT.

122 Great Suffolk Street

London, S.E. 1.

# An INTERNATIONAL COMMERCIAL AUTHORITY

IT is generally recognised by all in pharmacy and the drug, chemical and allied trades that the only worth-while business journal for the retailer, the wholesaler, the manufacturer and the exporter, is

## THE CHEMIST & DRUGGIST

Perhaps, however, the international character of its business influence is not fully realised. So it will be of interest to subscribers and advertisers alike to learn that copies of "The Chemist & Druggist" are BY REQUEST sent regularly to H.M. TRADE COMMISSIONERS at—

Calcutta, India.	Sydney, Australia.	Guadalajara, Mexico
Cape Town, Cape Colony.	Toronto, Canada.	(British Consulate).
Johannesburg, Transvaal.	Port of Spain, Trinidad.	Riga, Latvia "
Melbourne, Australia.	Wellington, New Zealand.	Zagreb, Serbia "
Montreal, Canada.	Winnipeg, Canada.	

It is also dispatched regularly, in accordance with instructions, to the COMMERCIAL SECRETARIES OF H.B.M. LEGATIONS at—

Berne.	Liège.	Peking.	Vienna.
Brussels.	Lima.	Rio de Janeiro.	Warsaw.
Bucharest.	Lisbon.	Rome.	Washington,
Buenos Aires.	Madrid.	Santiago.	Yokohama.
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## New Books

Harper, H.—*Introduction to Textile Chemistry*. 7½ in. x 4½ in. Pp. 189. 3s. 6d. Macmillan & Co., Ltd., St. Martin's Street, London, W.C. [This is one of the "Life and Work" series of text-books, the purpose of which is to supply material for instruction in the continuation schools established under the Education Act, 1918. The idea of the series is to compel the pupil's attention by putting before him facts which interest him and concern his particular environment. Mr. Harper has written the book under review for use in schools in districts where textile industries are carried on. The various chapters deal with the different fibres used for clothing, and explain incidental processes such as wool-scouring and bleaching and felting. Then follow chapters on oils and soaps, water, tests for textile fibres, and chemicals used in textile work. A few questions are set at the end of each chapter, and in the chemical portions of the book experiments are outlined for students' use. The book is an excellent one of its kind, with careful and accurate statements of facts which should interest the student.]

## English and Welsh News

The Editor would be obliged if subscribers would send him marked copies of newspapers containing items of interest for insertion in this or other news sections of the "C. & D."

### British Industries Fair

Railway companies have arranged to run special excursions at greatly reduced fares for the benefit of the trade buyers visiting the British Industries Fair. Only trade buyers are admitted to the Fair, the general public being, at the special desire of the exhibitors, rigorously excluded. The Fair will be held concurrently at the White City, London, and Castle Bromwich Aerodrome, Birmingham, from February 27 to March 10 next, and buyers from all parts of the kingdom will find that both sections can be reached with a minimum expenditure of time and money. The fare will in most cases be approximately the price of a single ticket for the double journey where passengers making use of the special excursions return on the same day. For passengers who desire to make a stay of from two to six days the cost of a return ticket will be about one-third more than the usual single fare. Full particulars can be obtained from Mr. Claude Taylor, Secretary, British Industries Fair, 35 Old Queen Street, S.W. 1.

### Chemists' Defence Association

The twenty-first annual report of the Chemists' Defence Association which will be presented to the annual meeting on March 29 states the membership was 6,300 on December 31, a net increase of 545. "This favourable result is due to the increased English and Welsh membership which the alliance between the Association and the Retail Pharmacists' Union has provided, as well as the greatly increased benefits now being offered." After mentioning details of the year's accomplishment the report states that the directors are bringing before the annual meeting a proposal for increasing the indemnity and defence benefits. The income and expenditure account which accompanies the report shows that subscriptions amounted to £5,300 12s. 4d. of a total income of £5,695 18s. 1d. The amount expended in claims for damages and legal expenses was £1,117 14s. 5d., on salaries £1,070 6s. 4d., and on directors' fees and fares £511 9s. 8d. The Association also contributed £195 16s. 6d. towards the "Anti-cutting Record," and £77 0s. 10d. to the "Year-book." The excess of income over expenditure was £1,668 6s. 10d.

### Wine-Licence Applications

The following wine-licence applications by chemists have been recorded since our last report:

Bradford licensing magistrates have granted wine off-licences to the following pharmacists: Messrs. A. Ambler, S. H. Bolton, L. D. Hawson, H. Savage, R. H. Stephenson, F. C. Stock, D. Taylor, and W. Whitehead.

The application of Mr. A. B. Higgs, chemist and druggist, Horley, has been refused.—Messrs. C. F. Kitching, chemist and druggist, Iron Bridge, and J. Thomas, chemist and druggist, Garstang, have been granted off-licences for the sale of medicated wines.

### Poisonings

The following cases of fatal poisoning, among others, have been recorded since our last report:

At Everdon, Laura Isham, aged eighteen, died from taking potassium cyanide. An open verdict was returned at the inquest.

At Dorechester, on February 21, an inquest was held on the body of Mr. John William Cussons, chemist and druggist, High Street East, who, the evidence showed, had been found dead at his place of business. The evidence pointed to his having inadvertently taken an overdose of hydrocyanic acid, and a verdict of "Death by misadventure" was returned.

### Birmingham

Chamomile tea is being advocated as a hair-wash in the local Press.

Mr. and Mrs. W. F. Southall were host and hostess to a large party in the Queen's College on February 17.



It is hoped that the number of counterfeit half-crowns in circulation locally will decrease, following the capture of four alleged culprits.

Recent contributors to the Lord Mayor's Fund include Alderman Clayton, Ph.C. (£50), Mr. W. A. Albright (£25), and Southall Bros. & Barclay, Ltd. (£25).

There was an influx of visitors to the city during the dog-show week, resulting in increased sales of canine specialities and an improvement in business generally.

Sir Robert Bird, Bt., eldest son of the late Sir Alfred Bird, is to contest his late father's parliamentary constituency. Sir Robert is a linguist, a practical chemist, and a clever colour-photographer.

The decision in the House of Lords in the case between local traders and the Great Western Railway Co., regarding the loss in transit of an entire parcel when being carried at "owner's risk," was in favour of the company.

The thirty-first annual exhibition of the Birmingham Photographic Society is to open on March 1. Lectures and displays are to be given, the concluding one being allotted to Mr. W. Partridge (apparatus department, Southall Bros. & Barclay, Ltd.) for "Display of Autochromes."

"Your reminiscent note of the Chicago fire interested me very much," writes a correspondent, "for about that time, when I was a pupil at the Wedgwood Institute, there was placed in the public museum a mass of earthenware which had been fused together as though it were made of glass, giving some idea of the intensity of the heat of the fire." (See *C. & D.*, February 11, p. 70.)

The concluding lecture, on February 17, of the series on "The Colloid State," by Dr. J. Newton Friend, dealt with the application of colloid chemistry to domestic and technical life. Referring to adsorption, the lecturer gave as illustrations the use of spiritus vini rectificatus in making mucilage of tragacanth, the decolorisation of vinegar by means of animal charcoal, and that of cochineal by kieselguhr. He explained the preparation of lakes and gels, and the theory of how the agate was naturally formed.

#### Exeter

A business exhibition, concerned chiefly with labour-saving appliances, was opened in the city on February 20 by the Mayor (Mr. Philip F. Rowsell, J.P., F.C.S.).

Holman, Ham & Co., Ltd., chemists, were represented at the recent photographic exhibition (organised by the Exeter Camera Club) by a comprehensive exhibit, under the direction of Mr. A. W. Walburn, chemist and druggist, who has several medals and other distinctions in photography to his credit.

Arrangements are being made on a large scale for a "shopping week," to commence on March 30. An enthusiastic meeting, presided over by the Mayor, was held in the Guildhall on February 20 in furtherance of the project. It was pointed out that Exeter draws on a shopping population of nearly 230,000.

#### Liverpool

It is rumoured that a well-known chemist, now retired from business, is to be a Parliamentary candidate for the city of Chester.

Mr. "Jack" Herman, of R. & J. Herman, chemists, has been warmly congratulated by his many friends on the splendid majority he received on February 21 in his election to the city council as the representative of Warbeck ward.

The "flu" epidemic is on the wane, and there has not been the tremendous rush of business that there was on the last similar occasion. (Income-tax assessors, please note!) Not for many years past have so many people been suffering from persistent hacking coughs.

Mangled in transmission, a sentence in the account of the Liverpool Chemists' Association meeting in our last week's issue (p. 45) was written: "On the motion of the President, all rose in assent to a vote of sympathy with the widow and family of Mr. Robert Henry West, Southport. . . ."

With the President of the Liverpool Chemists' Association (Mr. W. H. Clubb, Ph.C.) in the chair, a number of the members of the ladies' committee, which formed the nucleus of the ladies' reception committee at the Liverpool Conference in 1920, took tea, together with members of the Association, at the Palatine, and afterwards adjourned to the Playhouse.

"Liverpool is the slowest town I go into," was the startling exclamation, the other day, of a representative calling on chemists. His grievance was that he had that morning called on five different customers between nine o'clock and a quarter to ten, and not one of them was at business. A colleague of his in a small country town, not many miles away, beat this. He had four chemists to see, and he had to wait until eleven o'clock before any of them put in an appearance.

Addressing the Liverpool section of the Society of Chemical Industry on February 20, Professor J. M. Heilbron gave an interesting account of work done in the chemistry department of the University in the laboratory synthesis of formaldehyde and sugars, both in daylight and in ultra-violet light. The results already obtained, said the Professor, foreshadow very important developments along these lines in the near future. This hitherto obscure field is gradually yielding its secrets under patient and continuous research.

#### Nottingham

At the annual meeting of the Nottingham and Midland Eye Infirmary, on February 20, it was reported that £311 had been expended on drugs, etc., during the past year, as compared with £370 in 1920. Dressings and appliances had cost £110, as against £130.

In the Nottingham County Court, recently, in the case in which the Basford Chemical Co. claimed £100 damages from Davis Bros., chemical engineers, Manchester (*C. & D.*, February 18, p. 40), the judge held that there were no defects so far as the plant was concerned. Judgment was given for the counter-claim in the sum of £75.

#### Sheffield

Insurance dispensing, which has been heavy during the last few months, has eased down a little.

Carter & Sons, manufacturing chemists, have accepted the offer of temporary premises (see *C. & D.*, February 18, p. 40), and will thus be able to find work for the majority of their employees.

#### Miscellaneous

**NATIONAL ASSOCIATION OF WOMEN PHARMACISTS.**—Nominations for the Committee of the National Association of Women Pharmacists (London Group) should reach the secretary, Mrs. Irvine, 25 Cedars Road, S.W.4, not later than March 1. The retiring members are eligible for re-election.

**COST OF LIVING.**—It is announced by the Ministry of Labour that, on February 1, the average level of retail prices of all the commodities taken into account in Ministry of Labour statistics was about 88 per cent. above that of July 1914, as compared with 92 per cent. on December 31, 1921, and 176 per cent. on November 1, 1920.

**IN THE COURTS.**—At Bolton Police Court, on February 15, Enoch Pemberton, commercial traveller, was sentenced to six months' imprisonment in the second division for stealing sums of money belonging to T. Moscrop & Co., Ltd., manufacturing chemists, and another wholesale house.—At North London Police Court, on February 21, Edmund H. Tunbridge was committed for trial on a murder charge (*C. & D.*, February 18, p. 39).

**A CORONER ON CHEMISTS.**—In the course of a recent inquest at Leyton on the body of a man whose death was certified as being due to blood-poisoning from a wound, the coroner (Dr. A. Ambrose), commenting on the action of a chemist who, it was alleged, gave the deceased some medicine and told him to call again, said it was highly improper for a man to take on a function for which he was not qualified. A chemist's job was selling things and not doctoring people, which was beyond his duty, and let him in for trouble if anything happened.



## Irish News

### Belfast

Special Constable Orr, who was wounded in the recent Belfast disturbances, is a brother of Mr. T. J. Orr, proprietor of the Medical Hall, Aughnacloy, co. Tyrone.

Mr. W. J. McKee, assistant with Mr. H. E. McLroy, R.D., York Street, Belfast, who took first place in Ireland at the recent registered druggists examination, has purchased the business carried on at Grosvenor Road by Mr. T. McBurney.

On February 17, when Andrew Connor was charged with the murder of his wife, it was stated that she had been addicted to drinking methylated spirit, and that, when she refused to give up the bottle, he beat her to death. The jury found a verdict of manslaughter, and sentence of seven years' penal servitude was passed.

Two men entered Blake's Medical Hall, 49 Donegall Street, on February 20, and held up the manager and assistant at the point of revolvers. They robbed the till of £6 and annexed the manager's gold watch and chain, and about £2 in cash. The assistant's watch and chain were also taken, as well as about 25s. in cash.

At the recent annual meeting of the Irish Temperance League a resolution was passed stating that "owing to the insidious and intoxicating nature of many medicated and other wines which the public mistakenly purchase as a stimulating and health-giving tonic from chemists, druggists, and grocers the Government be asked to withdraw immediately all licences that are issued for the sale of wines of this character."

A curious position has arisen in Dundalk Union with regard to the analyst. The Minister of Local Government sanctioned the appointment of Mr. Thorpe as analyst, at the rate of £15 per annum, but Mr. Charles McMullen, 7 William Street South, Belfast, the previous analyst, who was dismissed after seventeen years' service because he was a Belfast man, has now written to be reinstated as the boycott was over. The Central Committee, Dublin, of the Belfast Trade Boycott, say that his reinstatement would be in accordance with the wishes of this Committee. It was agreed that nothing could be done in the matter until March 31.

### Londonderry

Special-constable R. McMahon, who was shot dead at Clones railway station during a recent affray, was a brother of Mr. Fred McMahon, of Baxter, Ltd., chemists, Church Street, Ballymoney.

The Ministry of Home Affairs for Northern Ireland is offering bonds of guardians in the six counties a free supply of prophylactic vaccine for influenza, on the understanding that no charge is to be made to patients.

Mrs. Badger, wife of Mr. Samuel S. Badger, Ph.C., the Medical Hall, Magherafelt, presented the prizes at the annual reunion and dance of the South Londonderry Motor-cycle Club, of which Mr. Badger is the President.

The special committee appointed by the Londonderry board of guardians in regard to the position of compounders at the city and waterside dispensaries have recommended that the two positions be amalgamated, and that Mr. John Thompson, Ph.C. (Smith & Co., Foyle Street), compounder at the city dispensary, be appointed at a salary of £150. Mr. Thompson will be at liberty to pursue his profession as heretofore. A Labour member of the board, who protested against the reduction of the salaries, said the board were offering Mr. Thompson less than a scavenger was being paid. The recommendations of the committee were approved.

**SICILIAN SULPHUR.**—The production of sulphur in Sicily was 120,000 tons in 1860, 538,534 tons in 1905, 181,374 tons in 1919, and 219,844 tons in 1920. Exports totalled 230,869 tons in 1918, 147,755 tons in 1919, and 190,175 tons in 1920. The figures for 1921 are not yet published. In order to increase production and export, the formation is proposed of a new company on the lines of the old Anglo-Sicilian Sulphur Co.

## Scottish News

### Brevities

An address on "The Drug Habit" was given, recently, by Mr. G. Forbes Johnston, F.S.M.C., chemist and druggist, Broughty Ferry, before the Dundee Rotary Club.

A lecture on x-rays and their increasing use in commerce was recently given by Mr. H. M. Martin, radiographer to the Edinburgh Royal Infirmary, to members of the Edinburgh and District Radio Society. Mr. Martin related how the rays were employed in testing pearls, pearl-fishing, for examining machinery, golf-balls, etc., and stated that a certain cocoa-manufacturing firm had examined all cocoa and chocolate under the rays to see that no foreign bodies or metallic substances were present.

After reviewing the researches that had been made in an endeavour to find a remedy for grass sickness in horses, Dr. J. F. Tocher, Ph.C., when addressing the Perthshire Agricultural Society, on February 17, mentioned that in 1921 an antitoxin was prepared for the investigators at the Wellcome Research Laboratories, and was used as a preventive agent and also for curative purposes. As the result of further research in the Wellcome Physiological Laboratory a new type of serum had been prepared, by which it was hoped successfully to immunise horses against the disease of botulism.

At a meeting of the governors of the Royal Technical College, Glasgow, on February 21, a letter was read from the Gordon College, Aberdeen, suggesting that to give effect to the new regulations of the Pharmaceutical Society of Great Britain it would be desirable to have a conference of the four Scottish centres recognised by the Society for the discussion of the regulations. Dr. Freeland Fergus, in supporting the suggestion, mentioned that the pharmaceutical school of the College, so far as it had gone, had been a great success. The conference would be able to gather exactly what the Society wanted, and might be able to offer some suggestions. The meeting endorsed the proposal to have a conference—Perth being suggested as the meeting-place—and agreed to send two representatives.

### Aberdeen

Following negotiations between the Aberdeen Pharmaceutical Association and the Aberdeen Parish Council, it has been agreed that, from May 16, the system of contracting for medicines shall be changed. By the proposed alterations recipients of medical relief would be in a position to obtain drugs, etc., ordered by the district medical officers, from any panel chemist within the parish. Payments will be for drugs, etc., actually supplied, at prices regulated by a recognised tariff. The Council proposed that half the cost of pricing and checking the prescriptions should be borne by the chemists, but the representatives of the local association refused to entertain the idea.

The annual meeting of the Aberdeen Pharmacists' Golf Club was held on February 16 in Forsyth Hotel. Mr. W. G. Mitchell (captain) occupied the chair, and there was a good turn out of members. The secretary stated that the membership was now fifty-five, and reported on the competitions played last season. The treasurer's report showed a balance in hand of over £6. The following were elected office-bearers: *Captain*, Mr. W. G. Mitchell; *vice-captain*, Mr. C. A. Michie; *treasurer*, Mr. John Forsyth; *secretary*, Mr. James Farquhar; *committee*, Messrs. A. C. Bonner, A. G. Beattie, W. F. Hay, J. G. Mutch, C. Nicholson, T. Milne, and W. Spence; *auditors*, Messrs. C. Simpson and W. F. Hay.

**HUNGARIAN OTTO OF ROSE.**—The Hungarian bureau for the cultivation and sale of industrial plants is investigating the possibility of cultivating on a large scale Bulgarian rose trees, with a view to the production of otto of rose in Hungary. The results have, so far, proved satisfactory, and negotiations are in progress with Bulgaria for the purchase of a large number of rose trees, which will be distributed among the Hungarian growers.



## Dangerous Drugs Act Cases

At Coventry, on February 20, several summonses were heard against Mr. Frank Rupert Granville Richards, chemist and druggist, managing director of Loveitt & Bones, Ltd., chemists, Hertford Street, for contraventions of Regulations made under the Dangerous Drugs Act, 1920, for the purchase and sale of cocaine.

The first case related to the alleged failure to make an entry in the necessary register on November 9, 1921, of cocaine received on that date. Mr. H. N. Marks, prosecuting upon instructions received from the Home Secretary, said that the charges were regarded as very serious. After the requirements of the Act were duly advertised the defendant was given every opportunity to put his house in order, as the first visit of the inspector was made on September 14, when he found no register being kept. No proceedings were taken. When he went again in November he saw there had been several entries with respect to cocaine, but none with respect to a transaction on November 9. The defendant had said he only dealt in very small quantities of cocaine, but the facts revealed that this was not correct. An inspector under the Act, giving evidence as to his visit to Messrs. Loveitt & Bones on November 9, said that he then examined the register, which contained several entries of purchases of cocaine. One item was dated November 4, and referred to the purchase of 25 oz. of cocaine hydrochloride from R. W. Greeff & Co., Ltd., London. On February 14, 1922, he again inspected the register, and found several other entries, but between the dates September 23, 1921, and February 14, 1922, there was no entry of cocaine purchased or received on November 9. Cross-examined: He would be surprised to hear that the defendant did not order the register until October 25. Mr. Arthur William Edwards, F.C.S. (R. W. Greeff & Co., Ltd.), gave evidence of despatching to defendant 25 oz. of cocaine hydrochloride by registered post on November 8. He had no record of any supply being sent to defendant on November 3 or 4. Mr. Richards, in the witness-box, said he was a qualified chemist with thirty years' experience. The entry in the register of November 4 was probably made when he sent the order and the cheque away. This cocaine was supplied in his capacity as chemist for the Zirol Chemical Co., until they could appoint a permanent chemist, and he was only acting in a friendly way. The cheque sent was from the Zirol Co. The magistrates' clerk pointed out the printed heading in the register stated that what was required was "date received." Mr. R. Hollick, for the defence, submitted that the explanation was simply that defendant made his entry on the day the stuff was ordered instead of on the day he received it. This was technically wrong, and defendant was sorry he had done this. The bench found the case proved. The second summons alleged that the entry on November 4 was untrue, because there was no cocaine received on that date. The bench found this proved also. Two summonses were next taken relating to failing to make entries in the register of cocaine received on September 24 and October 19. The case with respect to September 24 was dismissed, as the cocaine was not received until September 25. As to October 19, the defendant's reply was that he was waiting for the delivery of the register, which he did not get until October 26. After he received it he entered the transactions as soon as possible. This case was found proved.

### SUPPLYING A MANUFACTURER

Further summonses alleged that Mr. Richards supplied 25 oz. of cocaine on September 25 to Mr. Percy de Torton Harrison (trading as the Zirol Chemical Co.), who was not licensed or authorised to be in possession thereof; and similarly supplied on October 20 and November 5. Mr. Harrison said he was managing director and research chemist for the Zirol Co., and when a police official visited the premises witness produced a register and gave him every information asked for. Mr. Richards, giving evidence, said he had known Mr. Harrison as a dentist for twelve or fourteen years, and had been asked by him with respect to cocaine for dental purposes. In August

1921 Mr. Harrison contracted with Messrs. Greeff for 100 oz. of cocaine hydrochloride, and ordered it to be sent to Messrs. Loveitt & Bones. Mr. Richards consented to this arrangement. He believed one consignment of 25 oz. was sent before September, one on September 21, another on October 19, and a fourth on November 14. He calculated out the correct quantities for making a 1 per cent. solution. He had no interest in the Zirol Co., and acted simply as a friend. Cross-examined, he said that a limited company must either get a permit or employ a fully-qualified chemist. Mr. Hollick submitted that an unregistered dentist could have a 1 per cent. solution. Mr. Marks argued that Harrison was a dentist at one time, but now carried on the business of manufacturing this solution for other people. The Bench ruled against Mr. Hollick on the legal point. Mr. Richards proceeded to state that he refused any remuneration, but Mr. Harrison insisted upon giving £5 at Christmas. He had not sold cocaine to the Zirol Co., and only Zirol cheques had been given to Messrs. Greeff; he simply signed the order as chemist for the Zirol Co. He was only to act temporarily until the company could get a full-time chemist. After the cocaine was received he superintended its dilution to 1 per cent. Cross-examined, he did not know that Mr. Harrison had been refused a permit. He had told him he must keep a register of all purchases and of all the solution sent out. Mr. Hollick, in defence, said the magistrates had to consider what the mischief or the evil was that this Act was passed to remedy. The intention was to prevent secret trading, and to distort the Act in the form of the present summonses was absolutely absurd. Here they had open dealing between all the parties. Mr. Harrison was carrying on a *bona-fide* practice as a dentist in Rugby. The Bench found the case proved. There were two summonses for failing to enter sales on September 25 and October 20, and to these the defendant pleaded "Guilty."

### THE MANUFACTURER SUMMONED

Arising out of these proceedings there were two summonses against Mr. Harrison for being in possession of cocaine without being licensed or otherwise duly authorised. Mr. Marks submitted that the defendant was not entitled in any circumstances to be in possession of this drug. He had carried on business as an unregistered dentist, but had given up practising in Coventry. If he had been practising he would only be allowed to be in possession of a sufficient quantity for his own use. Mr. William Thomas Rigby, F.I.C., public analyst for Coventry, proved that a sample of Liquor Zirol submitted to him contained 1 per cent. of cocaine—the alkaloid itself. Mr. G. W. Moore, defending, submitted that the defendant was entitled to mix poisons under the Pharmacy Act, as he employed Mr. Richards, who was a chemist. Mr. Harrison, giving evidence, said that the preparation was for the purpose of a local anaesthetic for dental work. He supplied it to dentists, medical men, and hospitals. In reply to Mr. Marks, the defendant said he was not a qualified pharmaceutical chemist; he was a research chemist. He had applied for a licence in 1916, and was refused on the ground that his was a dental depot only. He made further representations that he was a research chemist, and in September 1919, after writing to the Prime Minister, who reopened the matter with the Home Office, particulars of his sales were asked for. After supplying these he had heard nothing further, so that he contended his case was still pending. He had not been told that under no consideration would he be granted a licence. The Bench came to the conclusion the case was proved, as was also the second information, after hearing evidence that about 300 1-oz. bottles of Liquor Zirol were seen on the defendant's premises. The third summons against Mr. Harrison related to the supplying of cocaine. Mr. Coble, dental practitioner, Wellingborough, said he purchased 6 oz. of Liquor Zirol from the defendant on October 10. Mr. Moore, for the defence, said that Mr. Harrison began to manufacture this preparation in 1907, as he wanted to discover a vehicle that would prevent any after-effect. There had never been a single objection to his preparation. He got over the objection by the Home Office that his business was a dental depot by registering



the company as manufacturing chemists. The Home Office had been aware he had been carrying on, and did not object until the proceedings against Mr. Richards had begun. He quoted a number of public bodies that had been using the preparation.

The Bench retired to consider their decision. On returning, the chairman said there was no doubt that under this new Act of Parliament technical offences had been committed. The magistrates did not consider that serious offences had been committed by either party. It was not like getting cocaine to be sold in little parcels in the streets, clubs, or hotels, but for use in legitimate business to ease the pain of many people. In the first case Mr. Richards would be fined 20s., and the other summonses against him would be dismissed on payment of costs. Mr. Harrison would be fined 20s. in the first case against him, and the other two would be dismissed on payment of costs.

## New Companies and Company News

P.C. means Private Company and R.O. Registered Office :

**SAYERS & BARNES, LTD. (P.C.).**—Capital, £3,000. Objects : To take over the business of a chemist and druggist carried on by W. C. Sayers at 199 Rushey Green, Catford. The first directors are : W. C. Sayers, 40 Clarendon Road, Lewisham, S.E. 13, and A. T. Barnes, 199 Rushey Green, Catford, S.E. 6. R.O. : 199 Rushey Green, Catford, London, S.E. 6.

**A. O. WILSON'S PHARMACY, LTD. (P.C.).**—Capital, £500. Objects : To take over the business of a drug store carried on by A. O. Wilson at The Central Pharmacy, 56 Nelson Street, South Bank, Yorks. The first directors are : A. O. Wilson and Mrs. Beatrice A. Wilson, Staveley House, 74 Middlesbro Road, South Bank. R.O. : 56 Nelson Street, South Bank, Yorks.

**SARACEN CHEMICAL CO., LTD. (P.C.).**—Capital, £300. Objects : To carry on the business of druggists, oil and colour men, importers and manufacturers of and dealers in all kinds of medical, pharmaceutical, and household remedies, and toilet, dental, and other preparations, etc. The first directors are : J. Reed, 32 Church Street, West Ham, chemist, and C. Fanning, 259 Gladstone Avenue, Wood Green, N. R.O. : Saracen Buildings, Snow Hill, London, E.C. 1.

**SCHWEITZER "COCOATINA" CO., LTD. (P.C.).**—Capital, £500. Objects : To acquire the business of vendors of cocoa sold under the trade-mark "Cocoatina" and various other trade-marks, carried on at 239 Caledonian Road, N., by the Cocoa and Chocolate Co., Ltd. (in liquidation), and to carry on the business of manufacturers of and dealers in cocoa, chocolate, and other food preparations and beverages, etc. F. W. Fletcher is permanent governing director and chairman, subject to holding 300 shares. R.O. : Vibrona Laboratories, Thane Villas, Holloway, London, N.

**WEST LANCASHIRE AND DISTRICT DENTAL SERVICE ASSOCIATION, LTD.**—Registered as a company limited by guarantee. Objects : To provide for treatment of persons insured under the National Insurance Acts and others; to support and protect the character, status, and interests of persons appearing on the Dentists Register; to carry on business as dental surgeons and mechanics, dentists, and to manufacture and deal in dental instruments and chemicals, etc. The management is vested in a committee, the first members of which are : W. H. Gilmour, 47 Rodney Street, Liverpool, professor of dental surgery; H. M. Clothier, 141 Breckfield Road, N., Liverpool, dental surgeon; H. W. P. Bennett, 42 Hamilton Square, Birkenhead, dental surgeon; H. Jennings, 16 Lord Street, Liverpool, dental surgeon; R. Kershaw, 24 Gloucester Road, Birkdale, dental surgeon; R. Watson, 22 Lord Street, Liverpool, dental surgeon; L. E. T. Forster, 9 Springfield Street, Warrington, dental surgeon; F. C. Wilkinson, 25 Rodney Street, Liverpool, dental surgeon. R.O. : 25 Rodney Street, Liverpool.

## Legal Reports

**Tenancy Dispute.**—In Margate County Court, on February 14, Mr. D. T. Evans, chemist and druggist, Margate, sued a former employee named Crutcher for possession of rooms. It was stated that the defendant entered the plaintiff's employ in June 1920, and a year later Mr. Evans offered him the flat over the Cliff Terrace branch at a rental of 25s. a week. The defendant terminated the engagement last October, and had had notice to vacate the flat, as plaintiff required the rooms for his staff. The defence was that there had been no real notice to quit by any definite date; the deputy-judge took the same view, and found for the defendant.

**Shellac Sales.**—Before Mr. Justice Bailhache, on February 13, in the King's Bench Division, the Crystalate Manufacturing Co., Ltd., Hadlow, Tonbridge, claimed to recover £834 5s. 11d. from Geo. Scriven & Co., Mark Lane, London, E.C., this being the balance of account on transactions in shellac between the parties. Mr. C. Johnson, for the plaintiffs, said they used a considerable amount of shellac in connection with their business, and they had various transactions with the defendants in shellac from April 1921. On April 14, last year, there was a bought note sent by defendants to the plaintiffs, which was a confirmation of a purchase of 100 bags at 200s., and in July there was a corresponding sold note in connection with the parcel, a loss of £21 12s. being shown, due to brokerage charges. There was another transaction for October delivery, the price being 170s. These goods were sold again on September 8 at 295s., leaving a sum in favour of the plaintiffs of £855 17s. 11d. Deducting from that sum the loss on the previous transaction the amount of £834 5s. 11d. was shown to be due. The defence was that the defendants contracted on behalf of a principal whom they disclosed to the plaintiffs. Mr. Chas. Davis, of the plaintiff company, gave evidence, and said he could not accept the suggestion that they knew the defendants' principal as a Mr. Zeigler. Judgment was entered for the plaintiffs for the sum claimed, with costs.

**Bovril Advertising Sketches.**—In the Mayor's and City of London Court, on February 16, before Judge Atherley-Jones, K.C., Mr. Sydney T. C. Weeks, artist, 98 Cheapside, London, sued Mr. George L. Corder, advertising specialist, West Hampstead, for the sum of £12 12s., for preparing six drawings for the defendant. Mr. H. Strouts, plaintiff's solicitor, said that the defendant was preparing a Bovril advertising booklet for the Avenue Press, Ltd. The sketches were finished by the plaintiff. Defendant said they were all right, and did not complain until pressed for payment. Now the defendant said the charge was excessive for the work done, and that £6 10s. was a fair sum. But he had not paid it into court. Plaintiff said one of the drawings was in ink and one in colours. He sent the account to the Avenue Press, Ltd., as he understood he was to do, but they merely said they had paid the defendant, with whom they contracted. Defendant wrote and said the sketches were the worst he had ever seen; that every Bovril bottle was a different shape, and all out of drawing. They were not worth more than 10s. 6d. each. Defendant told the court that the plaintiff's charges were out of all proportion to the work done. Plaintiff said he would have taken £6 10s. if defendant had paid it before coming into court. He earned his living as a commercial artist in work such as that which was before the court, because there was a ready market for it. Mr. J. B. Nicholas, art director of the Holford Bottomley Agency, Ltd., said the plaintiff's charge of two guineas each was fair and reasonable. Mr. R. J. Kelly, advertisement designer, called for the defendant, said £1 1s. each was quite enough for plaintiff's work. Judge Atherley-Jones said it would ill become him to criticise works of art such as were in dispute in that case. Unless artists reached the highest plane of their art they were badly paid. Plaintiff's work, though of a humble class, displayed great skill and great ingenuity and great taste. Judgment for the plaintiff for the amount claimed, with costs.



## Pharmaceutical Society of Ireland

### Council-meeting

THE monthly meeting of the Council of the Pharmaceutical Society of Ireland was held on February 14 at 67 Lower Mount Street, Dublin, the President (Dr. A. J. Barnes) in the chair. The following members of the Council were also present: Dr. James Walsh, Messrs. G. D. Beggs (hon. treasurer), W. F. Wells, James Michie, G. A. McLean Lee, A. H. Oliphant, James A. Doyle, Charles E. Digges, Fred. Storey, J. Carroll Culbert, Andrew Wilson, D. M. Watson, and Victor E. Hanna.

#### THE LATE MR. W. H. CONNOR

The President said before they began the agenda he should like to refer to the death of Mr. W. H. Connor, of Newry, brother and business partner of their ex-President (Mr. J. E. Connor, J.P.). Personally he had not had the pleasure of being acquainted with the late Mr. Connor, but he thought he was voicing the feelings of the meeting in extending their deep sympathy with their colleague in his personal bereavement and business loss.

#### CORRESPONDENCE

The Clerk of the Council, Dublin Castle, wrote transmitting copy of an Order in Council approving the appointment of Professor Hugh Ryan, M.A., D.Sc., F.I.C., as examiner to conduct the Pharmaceutical and General Chemistry Division of the Pharmaceutical Licence examination.

Letters were also received from Mrs. Mary C. Wells and Councillor W. F. Wells, conveying their thanks to the Council for their vote of condolence on the death of Councillor A. Owen Wells.

#### THE PRELIMINARY EXAMINATION

Messrs. G. Clarke, S. Green, C. J. Lord, M. Kelly, and J. McGrotty, who submitted certificates of having passed the examinations of the Board of Intermediate Education, Ireland, were admitted to Preliminary registration.

Mr. J. C. Culbert, in pursuance of notice of motion, moved:

That the Pharmaceutical Preliminary examination as hitherto conducted should be discontinued and a University Entrance examination, or such other examination as may be accepted by the Universities as equivalent to Matriculation, substituted therefor.

He said he desired to call attention to the words "as hitherto conducted," and "such other examination substituted therefor," "Such other examination" might mean their own examination, might, in fact, mean a variation of their present Preliminary examination. The point, however, was that they noticed a lack of education on the part of those coming forward as apprentices, and so long as their Preliminary examination was based on a low standard, naturally that condition of affairs would continue. Secondly, he thought it was the opinion of education authorities everywhere that a proper preliminary education in ordinary subjects is necessary before a technical education can be built up on it. It is not reasonable to expect candidates to take up the major part of their work on such a slender foundation as an education below Matriculation standard. Thirdly, if the interests of pharmacy are to be advanced, it is necessary that the junior members should have a sufficient education; their education should be in advance of the necessities of pharmacy. The Preliminary examination in the past may have catered for the minimum necessities of pharmacists, but they should consider the effect on future generations. He hoped the Society would rise to their responsibilities in this matter and deal with the resolution in the broadest possible way. He did not put the resolution forward in any contentious spirit, but with a desire to help to raise pharmacy, and he hoped it would be accepted in that spirit.

Mr. W. F. Wells asked if the proposer was moving that the Preliminary examination be abolished altogether, or only that it be increased in stringency.

Mr. Culbert replied that in the first instance, for argument's sake, he would say "abolished."

Mr. A. Wilson, in seconding, said the motion seemed to him reasonable and beneficial to pharmacy. Other businesses are raising the standard of education of their assistants. Are pharmacists wise in continuing to be satisfied with the conditions that obtained forty years ago, without making an effort to raise their educational standards? He gathered from the opinions expressed on the two previous occasions when that subject was discussed by the Council that the members are practically unanimous in their opinion that it would be a good thing if all their apprentices passed a Matriculation examination.

Mr. D. M. Watson said one would think, from the observations of Mr. Culbert and Mr. Wilson, that no attempts had ever been made to get the Preliminary examination accepted by other bodies. He also objected to the assumption apparently made by these two gentlemen that they are the only members desirous of reform, and that all the other members are opposed to it. He was anxious to see their Preliminary examination made as good as it could be, and he believed it was a question whether it is not quite as good a test as the Preliminary of any other professional body.

Mr. G. D. Beggs did not think they would get any University to accept the Preliminary examination. There is nothing, however, to prevent them increasing its stringency.

Mr. James Michie said the Society had conducted the Preliminary examination for fifty years, and there are now more candidates than there ever were. He had never met apprentices of the sort described, and he thought Mr. Culbert must have been very unfortunate in his experience.

Dr. Walsh pointed out that the principal object of increasing the stringency of the examination would be to have it accepted by the medical bodies. That would mean sanction by the General Medical Council, and in the present political situation it would not be easy to say what the powers of the General Medical Council in this country might be.

Mr. W. F. Wells was disappointed in hearing their friends from the North speaking as they had done of the Preliminary examination. Some years ago it had been modelled to the standard of the College of Surgeons. The percentage for a pass is higher than that required for University matriculation. The Council accepted in lieu of the Preliminary a University or College of Surgeons' entrance, so there is no excuse for anyone who prefers the University examination. On the other hand, many boys came to the business who would never dream of a University entrance. The object of the Council is to train pharmacists, not scientific chemists.

Mr. Fred. Storey, while agreeing with Mr. Wells that their business is to train good pharmacists, thought nothing should be put in the way of anyone who wanted to go on for medicine, and he knew that some of the assistants complained that the Preliminary would not be accepted by other bodies. He would like to support the resolution, but he saw great difficulty arising out of it; he therefore proposed as an amendment:

That a Committee be appointed, with power to add to their number, to consider the question of the Pharmaceutical Preliminary examination and general education, and to call in expert evidence if necessary, and to submit a report to the Council of such changes, if any, as are desirable.

Mr. D. M. Watson seconded, and Mr. G. A. McLean Lee supported.

The amendment was carried *nem. con.*, and the motion fell to the ground.

The following councillors were nominated as the Committee: The President (Dr. Barnes) and Messrs. Watson, Culbert, Wilson, Michie, and Doyle.

#### NEW COUNCILLOR CO-OPTED

Dr. J. A. Mitchell was co-opted a member of Council in room of the late Councillor A. Owen Wells.



## Pharmaceutical Society of Great Britain North British Branch

The fourth evening meeting of the session was held at 36 York Place, Edinburgh, on February 15, Mr. J. J. Forbes (vice-chairman) presiding.

The chairman said he regretted to say that, owing to the illness of Mrs. Kitchin, the chairman of the Executive was unable to attend the meeting. Mrs. Kitchin, however, had taken a turn for the better.

The following communications were read:

### AN INCOMPATIBLE POWDER

By Mr. John Noble.

The incompatibilities referred to arose in connection with the following prescription:

Calomel ...	...	...	gr. $\frac{1}{2}$
Phenalgin ...	...	...	gr. 5
Acid. acetylsal. ...	...	...	gr. 10
Pt. pulv. mitte 6.			

It was observed that, especially if any moisture was present and immediately if placed in water, the calomel, when added to the phenalgin, became grey and gradually darker. The first point was to ascertain the constitution of phenalgin, which is really a mixed powder and was found to contain sodium bicarbonate and ammonium carbonate. The other ingredient answered all the official characters and tests for acetanilide, which is phenyl-acetamide. A rough analysis indicated approximately: Acetanilide, 60 per cent.; sodium bicarb., 25 per cent.; ammon. carb., 15 per cent. On triturating calomel and ammonium carbonate, the mixture becomes black from formation of metallic mercury and mercuric ammonium chloride, and this seems to be clearly the explanation of the darkening which takes place when calomel and phenalgin are triturated. On first triturating the phenalgin with the acetylsalicylic acid, and then adding the calomel, no darkening takes place, and the powders were so dispensed. But another question of incompatibility arises. The alkaline sodium bicarbonate and the stimulant ammonium carbonate are understood to modify the objectionable action of the acetanilide, and are therefore an essential element in the therapeutic value claimed for phenalgin. But, in this case, immediately on adding water to the powder effervescence takes place, sodium and ammonium acetylsalicylate are formed, and the solution is distinctly acid from the large excess of acetylsalicylic acid. If any ammonium mercuric chloride is formed, this is immediately attacked by the free acetylsalicylic acid with formation of ammonium acetylsalicylate and mercuric chloride. It will be seen that the incompatibilities indicated may result in the formation of dangerous ingredients, though the quantity may be small, and that the acetylsalicylic acid and alkaline carbonates cannot co-exist in the same powder. For phenalgin, tablets or capsules seem the only suitable method for dispensing. Powders should be wrapped in waxed paper.

The next paper, by the same author, was

### AN INCOMPATIBLE OINTMENT

The incompatibility referred to arose in connection with the following prescription:

Ung. hyd. nit. dil.	
Ung. iodi.	
Paraffin. molle...	aa. 5ij.

In the B.P. ung. hyd. nit. dil. it is not easy to say in what precise combination the mercury ultimately remains in the ointment. Assuming that the mercury is present as a mercuric salt, the total amount in 2 drachms of the dil. ointment is only equal to  $1\frac{1}{2}$  gr. of mercuric nitrate. The 2 drachms of iodine ointment contain 5 gr. of iodine and 5 gr. of potassium iodide. From this it is clear that the mercuric salt in the ointment will be decomposed, with formation of potassio-mercuric iodide. The ointment was prescribed for the treatment of lymphadenitis (swollen glands), but it is important to note that what is being used is free iodine along with potassio-mercuric iodide, and not mercuric nitrate. The prescriber suggested leaving out the mercuric nitrate ointment.

### DISCUSSION

Mr. Wilson said he had experienced an analogous ointment containing ammoniated mercury and iodide of sulphur. After two days the ointment had become a flaming red, obviously from the formation of mercuric iodide; as a consequence the ointment was producing effects never intended by the prescriber.

Mr. Stephenson said there could be no doubt phenalgin was a mixture of uncertain composition, and he was surprised at it being ordered by a practitioner. Acetylsalicylic acid had such a tendency to become liquid when mixed with other synthetical substances that he thought it was almost necessary to have it dispensed alone. With regard to the ointment, he was reminded of a case in which a patient was taking potassium iodide internally and was at the same time using mercurial ointment externally. At the point to which the mercurial ointment had been applied a red patch appeared, and there was very serious resulting irritation. Evidently the potassium iodide taken internally had combined with the mercury locally applied to produce red iodide of mercury.

Dr. Sillar said he was in agreement that a substance of unknown composition should not be prescribed.

The chairman said acetylsalicylic acid, antipyrin, and caffeine citrate, when combined, liquefied. When, however, caffeine alkaloid was substituted for caffeine citrate the powder remained quite dry. In his district it was a common practice with veterinary practitioners to prescribe mercurial ointment and iodine ointment together. They evidently believed that in this way they got a stronger action.

The next communication was a

### NOTE ON CONCENTRATED INFUSION OF SENEGA (1 TO 7)

By Mr. Joseph Bremner,

who showed a sample of conc. infusion of senega which was almost completely full of the flocculent, somewhat gelatinous precipitate, giving the concentrated infusion a syrupy consistence. It seems probable that, as this was the lower portion of a large stock bottleful, it may have been used in dispensing by pouring off the clear liquid from above. Mr. Rutherford Hill had examined a sample of tincture of senega where precipitate had formed, and it was discovered that the alcoholic strength of the tincture was considerably below Pharmacopœial standard, and that this explained the precipitation, which was attributed to the gradual splitting up of the glucoside saponin or senegin of the senega, with production of sapogenin, which is precipitated, and glucose, which remains in solution. An examination of a tincture of senega which had been made some time, but in which there was no precipitation, gave clear indication of the presence of glucose, but the percentage of alcohol is sufficient to prevent precipitation of the sapogenin, so that the change is not apparent. The concentrated infusion of senega probably does not contain more than 25 per cent. of alcohol, and may even contain considerably less. The splitting up of the glucosidal saponins of the drug in the manner above indicated, with precipitation of the sapogenin, seems a probable explanation of the condition of the sample exhibited, and the probability as to the pouring off of the supernatant portion in diluting the infusion to Pharmacopœial standard may further explain the unusually large quantity of precipitate. It is not to be inferred that the bulky precipitate consists entirely or even chiefly of sapogenin. What is suggested is that the enzymic action causing coagulation or gelatinisation of the pectinous constituents of the drug also involves destruction of the glucosidal saponins and renders the infusion unsightly and therapeutically inert.

### DISCUSSION

Mr. Boa said it was no uncommon occurrence to find a considerable deposit in concentrated infusion of senega. He rather thought that under normal conditions it could not be made so as to avoid this. Similar precipitations were common in drugs containing glucosides. Making at a low temperature and concentration *in vacuo* were essential to get the best results.

The chairman said he had found that the tendency for concentrated infusion of senega to gelatinise could be readily got over by adding a little ammonia.



# THE ADVANTAGES OF THE METRICAL SYSTEM FOR PRESCRIBING

By W. C. Sillar, M.D., B.Sc., Lecturer on Experimental Pharmacology, Edinburgh University.

The conclusion formed from the experience of the last two years is that metrical prescribing will certainly displace the imperial method. Probably the process of changing from one to the other will begin at once, and the numbers of those who prescribe according to the metric weights and measures will gradually, if not rapidly, increase. The speaker went on to classify the kind of people concerned into students with nothing to unlearn, the practitioner who has acquired one method and sees no advantage in a change, and the pharmaceutical chemist who may naturally dread the confusion of two concurrent systems. Lest any should fear possible difficulties, there may be formulated certain principles and practices which should go far to obviate such a prospect. The advantages of the metric system consist in the easy divisibility by tenths and the simple interchange into equivalents between the respective weights and measures. We may combine the advantages of both systems to some extent for prescription-writing by visualising the fluid domestic measures—e.g., the teaspoonful, etc.—by the nearest metrical equivalent—5 c.c.—and then doubling, thus :

5 c.c. is approximately equivalent to a large teaspoonful.
10 c.c.       "       "       "       dessertspoonful.
20 c.c.       "       "       "       tablespoonful.

Or, if we start from 1 c.c., and having doubled it (2 c.c.), and wishing about twice the quantity again instead of 4 c.c., take 5 c.c. in order to make it metrical. The patient should be directed to provide himself with a measure graduated in these quantities in place of domestic teaspoons, etc. This principle may also be carried out with our conception of the unit to represent grain as 0.05 of a gram. But the discrepancy becomes marked when we come to 10 grains. Therefore, in deciding on dosage we must make a new departure, and consider whether 1.0 gram is too large a quantity or 0.5 too small. Thus, for quinine in malaria, to represent a 10-grain dose 1 gram is the preferable quantity, but for barbitone and phenazone 0.5 as the metrical equivalent is the safer quantity. Having confined our figures, therefore, to 1, 2, and 5, the questions of symbols and nomenclature may be also simplified. To prevent errors in placing the decimal point draw a perpendicular line immediately to the right of the whole numbers. Solids are weighed and fluids measured. Percentages are expressed by the weight of a solid in the volume of a fluid, and in the case of fluids by volume in both. The following are illustrative examples :

Phenacetin ... .. 0   5	Liq. hydrarg. perchlor. 40   0
P. opii ... .. 0   05	Pot. iod. ... .. 10   0
P. ipecac. ... .. 0   05	Aq. menth. pip. to 200   0
Sacch. lact. ... to 1   0	Dissolve and make a mixture.
Send three powders.	Sig. 10 c.c. (a dessertspoonful)
Sig. one to be taken at night.	thrice daily.

With regard to names, *milligram* (one-sixtieth grain) for quantities up to 50 milligrams (1 metrical grain), and *gram* beyond this is all that is required. For instance, the difference between .2 and .02 of a gram is more easily apprehended in speech as written than by saying .2 of a gram and 20 milligrams. When speaking of fluids we say c.c., or .5 of a c.c., or .05 of a c.c. (one drop). There is a difficulty still to be faced by those who have learnt doses by one system and wish to translate them. Exact arithmetical equivalents are too troublesome here, but if we take these the following should be found sufficient :

1 gram	= 15 grains for all greater quantities.
.05 "	= 1 grain for intermediate quantities.
.001 "	= $\frac{1}{100}$ grain for fractions.
5 c.c.	= 1 fluid drachm (teaspoonful).
1 c.c.	= 15 minims.
.05 c.c.	= 1 drop.

With regard to the difficulties to be met with by the pharmacist dispensing such prescriptions, it is much easier to weigh and measure metrical prescriptions metrically than to translate into the imperial system. Bottles used for 1-oz., 2-oz., 4-oz., and 8-oz. mixtures have served

without difficulty for 20 c.c., 50 c.c., 100 c.c., and 200 c.c. mixtures respectively. But the 6-oz. bottle will be seldom if ever used in a metrical prescription.

## DISCUSSION

The chairman said he gathered that in the near future there might be in Scotland 600 medical practitioners writing prescriptions in the metrical form. He was glad to assure Dr. Sillar that, so far as the pharmacists were concerned, they would be quite ready all over the country to dispense these prescriptions.

Mr. Stephenson said that the acquisition of the metric or decimal system in practice was very like the learning of a language—theory counted for little and practice was everything. The decimal system had come to stay, and the sooner we made up our minds to master it the better. The chief argument of opponents of the metric system was the so-called indivisibility of 10. But if 10 could not be divided by 3, neither could 12 be divided by 5. This argument would not hold water. The first step was to handle drugs under the metric system as freely as possible, and one would soon become practically acquainted with the quantities represented. Another difficulty in the process of transition was that of doses. He himself had been surprised at the ignorance of metric doses shown by candidates at examinations. For this he laid the blame on the British Pharmacopœia for giving doses in decigrams and centigrams instead of fractions of a gram, and the other was the pharmacy schools for not taking the matter sufficiently seriously. Mr. Stephenson then proceeded to show by means of the blackboard how imperial doses could be readily translated into metric equivalents for the writing of prescriptions. By making sixteen doses, grains and minims became respectively grams and millilitres. Another point, and one which would be welcomed by students, was the fact that under the metric system percentage calculations would be a thing of the past. It was great news to learn from Dr. Sillar that the students at Edinburgh University were now being taught only the metric system, and he foresaw a time when heavy and intricate calculations, and indeed all arithmetic, would be banished from pharmacy.

Mr. Boa said he was gratified to find that the writing of prescriptions was now in the way of coming into line with the Pharmacopœia, in connection with which pharmacists had had to use the metric system for some years. He thought it was a bad plan to proceed by converting the metric weights into British weights. As an examiner he had found that in setting a practical paper a student who proceeded by using metric weights and measures very seldom went wrong, whereas when they attempted to translate from metric into British they almost invariably made slips. The perpendicular line, he thought, was quite a good idea. He thought it would be well that all young students should be brought up according to the metric system, but they would just have to allow those of the older school to go on in the old way until they died out. One point that might be against the metric system and in favour of the British system was that the grain was a smaller unit, and they could just prescribe so many grains without any idea of division.

Mr. McEwan was glad to find Edinburgh taking a lead in this development, and he hoped they would have many imitators. Of course in Continental practice all ingredients, both solid and liquid, were dispensed by weight. On that point he was glad to notice Dr. Sillar recommended that solids should be dispensed by weight and liquids by measure, which was a well-recognised principle in British pharmacy. He thought the perpendicular line idea was a good one. In his experience they had had the metric weights and measures in constant use at the dispensing counter for many years.

Mr. Grieve asked if the advantages of the metric system are sufficient to justify such a sweeping and even revolutionary change. The only disadvantage of the imperial system mentioned was the multiplication involved. Why not retain the whole imperial system? The only advantage that would accrue would be to the pharmacist. It was said the metric system had been found easier to



teach the medical students. But let them ask the student what his difficulties are. The difficulties had been made far too much of. It was said the adoption of exclusive teaching of the metric system was a war emergency. The emergency had passed and the authorities should revert to the imperial system, which was much more satisfactory.

Mr. Tait thought it would be necessary to teach both systems during the transition stage.

Mr. Rutherford Hill said he had received several interesting comments from examiners and teachers of pharmaceuticals, and these he had summarised. He had also received an interesting note from Mr. A. B. Gilmour, of the Central Checking Bureau, Glasgow, who handled between two and three million prescriptions annually.

Mr. Gilmour said, with the exception of the Greenock area, the number of Insurance prescriptions written in the metrical system was almost negligible. From Greenock about 200 per annum were received, and the chemists had complained that these caused delay in their work, and might lead to errors. His own view was that such a complaint induly depreciates the pharmacist's education and qualification. Judged from the point of view of a pricing bureau the metric system presents no advantages. On the contrary, it has the following disadvantages: The pricing staff have to be trained to use the metric system. The work involved in the necessary converting of the quantities for pricing purposes from the metric to the imperial system tends to slow the work. When changed from metric to imperial the result is usually an odd quantity. If the metric system becomes general a new metric Drug Tariff and Tariff Informer would be necessary. There is also an objection to sending out a medicine in a partially filled bottle. Presumably one reason for adopting the metric system is that it is more scientific and accurate. But in every-day practice in the area in which it is most common they only give the approximate measure, which appears wrong in principle.

Mr. T. Wilson, examiner, considers Dr. Sillar's scheme was a compromise or dovetailing of the old and the new on a basis of approximation. When two systems co-existed a student thought in the one most familiar. In dispensing, such a student easily goes wrong in using metric weights, frequently giving ten times or one-tenth of the quantity ordered. The vertical line would certainly reduce possibility of error. Ointment containers need not be full. Mixtures, etc., should be sent out in bottles of metric capacity, which are obtainable.

Mr. M. Meldrum, examiner, states that metric prescribing may become more common at an early date. Consequently pharmacists should be on guard to prevent any mistakes. He was surprised to find Dr. Sillar using c.c. when the B.P. uses mil. In Britain and the Colonies the official term should be used. When speaking of equivalents Dr. Sillar seems rather vague. Vagueness or inaccuracy in thought tends to error in action, which dispensers must guard against at all costs. In the examinations he had noted that candidates tended to become muddled, because they translate into imperial and cannot think metrically. Familiarity in using should speedily eliminate this defect. Greater accuracy and elimination of errors were the considerations that would justify a change to dispensers, and only actual experience would show whether the metric system gave these advantages.

Mr. Stephen, examiner, says in Dundee only one practitioner uses the metric system. To the pharmacist who has the necessary metric weights and measures, metric scripts present no difficulty. Yet they are received with the same degree of comfort, simply because they are unusual. From a student's point of view it is a pity to run two systems.

Mr. J. H. Ramsay, examiner, says the metric system in prescribing is very much over-due, and the delay is probably partly due to the war. It is useless to teach both systems, hoping students will choose the metric. This teaching ought to be taking place in all the Universities concurrently. The Council's attention should be directed to Dr. Sillar's statement. It might be accepted officially. A copy should be sent to recognised schools

with the Society's recommendations. The placing of whole numbers to the left of a line, and parts to the right, is quite good and eliminates the trouble with dots.

J. Conroy Henderson, teacher, Heriot-Watt College, Edinburgh, says the metric system facilitates teaching and is helpful to the retail pharmacist. Meantime, to teach one system to pharmacy students is impracticable. But compulsory adoption of the metric system is the only method by which uniformity can be obtained.

Mr. E. G. Bryant, teacher, Gordon's College, Aberdeen, is glad that Edinburgh University has taken up this matter. In other schools the metric is mistakenly taught along with the British system. From the teacher's standpoint Dr. Sillar's proposal is much to be desired.

Mr. James P. Todd, teacher, Royal Technical College, Glasgow, says it would be more conducive to uniformity to use the term mil. in place of c.c. The metric system, for ease of calculation, is in every way superior to the older method, and presents no terrors once the unfamiliarity has worn off.

Dr. Sillar said he was gratified to discover such a remarkable consensus of opinion on the part of practising pharmacists in favour of the proposals he had submitted for discussion.

On the motion of the chairman a vote of thanks was awarded to Mr. Noble and Mr. Bremner, and also to Dr. Sillar. Attention was directed to books added to the library, and a vote of thanks was awarded to the donors of books.

### East Anglia Federation

A meeting of delegates from associations in the East Anglia Federation was held at 16 Bloomsbury Square, London, W.C., on February 16. The chair was taken by Mr. E. T. Neathercoat (President); the following delegates attended: Messrs. C. Smalley (Ipswich and Suffolk), J. G. Fletcher (Watford), A. Catto (Essex), W. E. Gaze (Walthamstow), S. G. Tydeman (Essex), F. E. Whitfield (Great Yarmouth), J. Hayllar (Hoddesdon), F. H. King (Southend-on-Sea), S. T. Milbank (Hertfordshire), A. R. Keith (East London), A. R. Melhuish (Council representative). It was decided provisionally to form branches at Ipswich, Norwich, Colchester, Watford, Eastern Metropolitan (with Stratford as centre), Southend, Cambridge, Peterborough, and Luton or Bedford. A provisional allocation of the towns and villages in the following counties to the foregoing branches was made: Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Norfolk, and Suffolk.

Owing to the date of the meeting clashing with the annual dinner of the Peterborough Association, that Association was not represented. It was arranged that the Peterborough representatives should be asked to attend the meeting at Nottingham on February 22, when the Midland area was to be dealt with.

### West Midland Area

A meeting of delegates from associations in the West Midland area was held at the Chamber of Commerce, Birmingham, on February 16. There were present: Mr. Pilkington Sargeant (Vice-President), Mr. H. O. Lloyd, and the following delegates: Messrs. J. W. Atkinson (Birmingham), J. B. Gouldbourn (Shrewsbury), A. Williams (Shropshire), H. M. Traumer (Smethwick), G. R. Williamson (Coventry), J. Robinson (Warwickshire), H. H. Thatcher (Walsall), S. Phillips (Wolverhampton), C. H. Trotter (Staffordshire), E. W. Mann (Birmingham), Donald G. Pout (Worcester), H. Rigg (Birmingham), W. Lean (Burton-on-Trent), and F. Smith (Birmingham), secretary of the Federation. Mr. Lloyd was elected chairman, and he and Mr. Sargeant addressed the meeting. The following branches were suggested, and the towns and villages in the area were provisionally allocated to the respective branches: Staffordshire, Walsall and district, North Staffordshire, Wolverhampton and district, Smethwick and district, Worcester city and county, North Worcestershire, Shropshire, Birmingham, Herefordshire, and Warwickshire.



## Westminster Wisdom

By the "C. & D." Parliamentary Representative

### CLINICAL THERMOMETERS BILL

Lord Stanmore moved the second reading of the Clinical Thermometers Bill in the House of Lords on February 22. The measure, he explained, regulates the sale of clinical thermometers by providing that they must be tested, approved, and marked in accordance with regulations made by the Board of Trade before they can be supplied or delivered. The provision, he said, had been already in operation under the Defence of the Realm Regulations, and its value had been universally recognised by the medical profession. The Bill was read a second time.

### SAFEGUARDING OF INDUSTRIES ACT

#### Prices of Scheduled Chemicals

Dr. Murray asked the President of the Board of Trade, on February 20, if he is aware of the statement made before the Referee that the day following the publication of the Board of Trade list wherein santonin was included as a fine chemical and subject to a duty of 33½ per cent. the wholesale dealers increased their price by 30 per cent.; can he give the number of other commodities on which similar increases were imposed; if not, can he take any action to ascertain the number; and would he consider the advisability, on any other fresh articles being included, of providing legislation to prevent an increase in price except on goods on which duty has actually been paid.

Mr. Baldwin replied that he was aware that the statement mentioned was made in the course of the santonin case. He was unable to state in how many cases advances were made, but he pointed out that in a number of instances the prices of chemicals have fallen since the Act was passed. An inquiry into the price movements of all commodities covered by the Schedule to the Act would involve so much labour that it would not be justified by the utility of the results obtained. The suggestion made in the last part of the question is, in his opinion, impracticable.

#### Iodol

Mr. T. Thomson asked the President of the Board of Trade, on February 20, if iodol is manufactured in this country; if not, whether the only effect of the imposition of 33½ per cent. duty under the Safeguarding of Industries Act is to increase the cost of this antiseptic to all hospitals; and whether, under these circumstances, he will recommend that steps should be taken to exempt such articles from the operation of these restrictive duties.

Mr. Baldwin replied that, so far as he is aware, iodol is not manufactured in this country, but is a German product, consumed here only on a very small scale. No doubt in these circumstances the price tends to rise by the amount of the duty. The reply to the last part of the question is in the negative, and he reminded the hon. member that an amendment, which would have enabled the course suggested by him to be taken, was considered during the Committee stage of the Safeguarding of Industries Act, but did not appear to be acceptable to the House.

#### Spectacles

Mr. Kiley asked the Financial Secretary to the Treasury on February 21 why duty is collected under the Safeguarding of Industries Act on some kinds of spectacles and not on others; if this is on the ground of difference in magnification, does he work on some standard of definition; and, if so, will he state for the information of those concerned what standard it is.

Sir W. Mitchell-Thomson replied that all spectacles fitted with lenses are liable to duty in respect of the lenses, and he is not aware of any cases in which duty has not been collected accordingly.

M. LESPIEAU has been appointed Professor of Chemical Theory at the Sorbonne (Paris Faculty of Sciences). This new chair is a result of abolishing the chair of Botany, vacant owing to the death of M. Matruchot.

## Retail Pharmacists' Union

**Annual Report.**—The first annual report of the Retail Pharmacists' Union, to be presented at the annual meeting on March 29, in the Adam Hall, Federation of Medical and Allied Societies, 12 Stratford Place, London, W., has been sent to us. The report acknowledges the generous assistance rendered by the Pharmaceutical Society in the formation of the Union, "which resulted in the creation of an organisation entirely separate from the Pharmaceutical Society, although the most cordial relationships exist between the two bodies." The membership (as shown from the report of the Chemists' Defence Association) is 6,300, which the report adds "is very encouraging, bearing in mind that the Company Chemists' Association is not included in those figures." The activities of the Central Checking Bureau taken over by the Retail Pharmacists' Union are referred to, and appended to the report is a statement of income and expenditure for 1921. The income amounted to £6,742 5s. 5d., and includes subscriptions £1,823 16s. 9d., donations £519 4s., levies on Pharmaceutical Committees £4,249 7s. 10d. The expenditure includes "Anti-cutting Record" £195 16s. 6d., "Year-book" £77 8s. 10d., salaries and wages £2,688, and travelling expenses £464 15s. The balance of income over expenditure is £1,605 6s. 6d.

**Bournemouth.**—A meeting of members of the Retail Pharmacists' Union living within a radius of fifteen miles was held on February 17, when it was unanimously decided to form a local branch of the R.P.U., to be known as the Bournemouth and District branch, and to make application to headquarters for recognition. The following officers were elected: *Chairman*, Mr. H. J. Martin (Christchurch); *Vice-Chairman*, Mr. Francis Rose; *Treasurer*, Mr. D. D. Buchan; *Committee*, Messrs. J. A. R. Dick, N. D. Desborough, T. H. Seed; *Secretary*, J. H. Sharland. Mr. H. J. Martin then addressed the meeting on the first year's work of the Union, prefacing his remarks by paying a handsome tribute to the services rendered to the Union by Mr. Mallinson. Dealing with Insurance matters, he declared that any reduction of the present rate of remuneration to chemists was unjustifiable, and assured his audience that the executive committee was still negotiating with the Ministry of Health. The outlook is not less hopeful than when the reduction was first threatened. Mr. Rose, in proposing a vote of thanks, suggested that the branch should use its endeavours to return Mr. Martin to the executive committee at the forthcoming election, a suggestion which was heartily endorsed. Mr. Francis Rose was elected delegate to the forthcoming Conference.

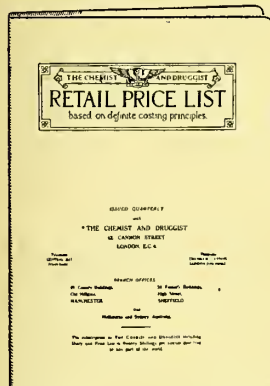
**Cardiff.**—A meeting of the Cardiff branch was held on February 16, Mr. Leo Joseph in the chair. Mr. J. D. Jenkins was elected to represent this branch at the R.P.U. Conference to be held in London on March 29. The question of nomination of a candidate for the Executive of the R.P.U. was considered. Mr. Leo Joseph was unanimously adopted for the election on March 25. Mr. L. Joseph said he was quite willing to go forward as a candidate, provided no other member wished to be nominated. A discussion arose on the sale of unprofitable proprietaries, and as to the steps to be taken to bring into line those manufacturers and wholesalers who have not formulated terms which give the retailer the profit sought for by the P.A.T.A. propaganda committee. The question of the indiscriminate supply of milk foods and others to the public by clinics, child-welfare clubs, etc., was brought forward. A small committee was formed to interview the medical officer of health of the city, with the idea of forming some scheme to obviate this growing danger. A matter of much interest was discussed—namely, the displays of various chemists' goods which were to be seen in many of the general dealers' stores at prices much below the usual or protected price. Two lines were mentioned; and it was felt that, generally speaking, these lines exhibited were either war stock or salvage stock, and that in the course of a short period this question would right itself.





## THE NEXT LIST

We shall publish the next Retail Price List in our issue of April 8, and shall use our best endeavours to improve the list. We have received a number of useful suggestions to that end, and shall be glad of further criticisms. These we shall carry out so long as they are practicable and are consistent with the scientific basis upon which the Retail Price List is devised.



## FILING COVERS

The convenience of having a filing cover for the preservation of the Retail Price List will be appreciated by all users of the list. The filing cover which we have had made specially for the purpose is of stout cardboard with cords, so that the list can be firmly held in the cover. We can supply these filing covers at 1s. each, post free. Postal order or stamps should accompany orders.

## CHANGES IN PRICES

We shall be glad if users will make the following alterations in the January list:

- Acetamidosalol*: Cost—4s. 6d. oz. Sell—6s. 9d. oz.; 1s. 4d. dr.  
*Acid. benz. synth.*: Cost—3s. 10d. lb. Sell—1s. 9d. 4 oz.; 6d. oz.; 1d. dr.  
*Acid. chromic.*: Cost—1s. 3d. oz. Sell—5d. dr.  
*Acid. chromic. coml.*: Cost—2s. 6d. lb. Sell—3s. 9d. lb.; 1s. 1d. 4 oz.; 4d. oz.  
*Acid. formic. cryst.*: Cost—1s. 9d. oz. Sell—6d. dr.  
*Acid. oxal. recryst.*: Cost—2s. 10d. lb. Sell—1s. 4d. 4 oz.; 4½d. oz.; 1d. dr.  
*Acid. pyrogal. pond.*: Cost—1s. oz. Sell—1s. 6d. oz.; 3½d. dr.  
*Acid. trichloroacetic.*: Cost—2s. 6d. oz. Sell—9d. dr.  
*Acid. valerianic.*: Cost—2s. 8d. oz. Sell—10d. dr.  
*Alcohol amylic. coml.*: Cost—3s. 6d. lb. Sell—1s. 5d. 4 oz.; 4½d. oz.  
*Aloinum*: Cost—11½d. oz. Sell—4d. dr.  
*Argent. colloid.*: Cost—9s. oz. Sell—2s. 7d. dr.; 1s. scruple.  
*Arnica rhiz. pulv.*: Cost—5s. 8d. lb. Sell—8d. oz.  
*Balsam. Peruvian.*: Cost—1s. 1d. oz. Sell—1s. 8d. oz.; 4d. dr.  
*Balsam. sulphur.*: Cost—2s. 6d. lb. Sell—3s. 9d. lb.; 1s. 1d. 4 oz.; 4d. oz.  
*Barbitonum*: Cost—1s. 9d. oz. Sell—6d. dr.  
*Benzamin. hyd.*: Cost—4s. dr. Sell—6s. 10d. dr.; 2d. gr.  
*Benzamin. lact.*: Cost—4s. dr. Sell—6s. 10d. dr.; 2d. gr.  
*Benzonaphthol*: Cost—9d. oz. Sell—1s. 2d. oz.; 3d. dr.  
*Benzylbenzoas*: Cost—9½d. oz. Sell—3d. dr.  
*Calcii lactas*: Cost—4s. 3d. lb. Sell—1s. 11d. 4 oz.; 6d. oz.; 1d. dr.  
*Canada balsam*: Cost—13s. 3d. lb. Sell—5s. 8d. 4 oz.; 1s. 6d. oz.; 3d. dr.  
*Carbon. tetrachlor.*: Cost—2s. 6d. lb. Sell—5s. 8d. lb.; 1s. 7d. 4 oz.  
*Caulyphyllin.*: Cost—2s. 4d. oz. Sell—8d. dr.  
*Cera carnauba (grey)*: Cost—2s. 2d. lb. Sell—3s. 3d. lb.; 11d. 4 oz.; 3d. oz.

- Chlorophyl. (oil-sol.)*: Cost—3s. 4d. oz. Sell—5s. oz.; 1s. 2d. dr.  
*Chlorophyl. (spt.-sol.)*: Cost—2s. 10d. oz. Sell—3s. 5d. oz.; 10d. dr.  
*Coccul. Ind. pulv.*: Cost—2s. 4d. lb. Sell—3s. 6d. lb.; 1s. 4 oz.; 3½d. oz.  
*Colloïd. vesicans*: Cost—1s. 9d. oz. Sell—2s. 6d. oz.; 5d. dr.  
*Duboisin. sulph.*: Cost—1s. 6d. gr. Sell—3s. gr.  
*Ess. moschi*: Cost—4s. oz. Sell—6s. oz.; 1s. 2d. dr.  
*Ext. strophanth. sem.*: Cost—3s. 10d. oz. Sell—1s. dr.  
*Heliotropin. cryst.*: Cost—1s. 6d. oz. Sell—2s. 3d. oz.; 5d. dr.  
*Henne fol. pulv.*: Cost—2s. 4d. lb. Sell—3s. 6d. lb.; 1s. 4 oz.; 3½d. oz.  
*Liq. ammon.*: Cost—10½d. pt. Sell—1s. 3d. pt.; 1d. oz.  
*Liq. ammon. fort.*: 880: Cost—9½d. lb. Sell—1s. 2d. lb.; 4d. 4 oz.; 1½d. oz.  
*Magnes. salicyl.*: Cost—9½d. oz. Sell—1s. 3d. oz.; 3d. dr.  
*Mangan. glycerophos.*: Cost—1s. 11d. oz. Sell—3s. oz.; 7d. dr.  
*Ol. aurant. amar.*: Cost—2s. oz. Sell—3s. oz.; 7d. dr.  
*Ol. aurant. dulc.*: Cost—2s. oz. Sell—3s. oz.; 7d. dr.  
*Ol. myrcie acris.*: Cost—2s. 2d. oz. Sell—3s. 3d. oz.; 8d. dr.  
*Ol. myristic. exot.*: Cost—1s. oz. Sell—1s. 6d. oz.; 4d. dr.  
*Ol. patchouli opt.*: Cost—5s. oz. Sell—7s. 6d. oz.; 1s. 6d. dr.  
*Ol. sinap. vol.*: Cost—4s. 3d. oz. Sell—6s. 5d. oz.; 1s. 5d. dr.  
*Piment. fruct. pulv.*: Cost—10½d. lb. Sell—1s. 4d. lb.; 5d. 4 oz.; 2d. oz.  
*Podoph. resin.*: Cost—3s. 4d. oz. Sell—1s. dr.  
*Potas. acet. gran.*: Cost—2s. 10d. lb. Sell—4s. 3d. lb.; 1s. 3d. 4 oz.; 4½d. oz.  
*Potas. bichrom.*: Cost—1s. 5d. lb. Sell—2s. 1d. lb.; 7d. 4 oz.; 2d. oz.  
*Potas. chlorid. pur.*: Cost—2s. lb. Sell—10½d. 4 oz.; 3d. oz.  
*Potas. chlorid. coml.*: Cost—1s. lb. Sell—1s. 6d. lb.; 5d. 4 oz.  
*Potas. sulph. pulv.*: Cost—1s. 10d. lb. Sell—10d. 4 oz.; 3d. oz.  
*Potas. sulphurat.*: Cost—2s. lb. Sell—3s. lb.; 10½d. 4 oz.; 3d. oz.  
*Quillaia cort.*: Cost—10½d. lb. Sell—5d. 4 oz.; 1½d. oz.  
*Quillaia cort. cont.*: Cost—1s. 2d. lb. Sell—6d. 4 oz.; 2d. oz.  
*Sod. perboras*: Cost—3s. 6d. lb. Sell—1s. 6d. 4 oz.; 5d. oz.  
*Spartein. sulph.*: Cost—1s. 3d. dr. Sell—2s. dr.; 1d. gr.  
*Stront. brom. cryst.*: Cost—4d. oz. Sell—6d. oz.; 1d. dr.  
*Terpin. hydras.*: Cost—5d. oz. Sell—8d. oz.; 1½d. dr.  
*Theocin sod. acet.*: Cost—13s. 9d. oz. Sell—4s. dr.; 1d. gr.  
*Xylol rect.*: Cost—2s. lb. Sell—10½d. 4 oz.; 3d. oz.

The following changes in cost prices are not sufficient to affect the 4-oz. and 1-oz. retail prices:

- Cera Japon.*, 1s. 8d. lb.; *ceresin alb.*, 1s. 5d. lb.; *ceresin flav.*, 1s. 4d. lb.; *cerii oxal.*, 5½d. oz.; *ferri alum. pur.*, 2s. 4d. lb.

**CZECH CUSTOM DUES.**—A commission was recently appointed by the Czechoslovakian Chamber of Commerce to inquire into the application of Article 630 of the Custom tariff, which includes a large number of pharmaceutical preparations. Owing to the wide range of preparations, differing materially in value, it is difficult to know the correct Custom charge. While the representatives of the chemical and pharmaceutical industry were in favour of the introduction of *ad valorem* dues, the Minister of Finance prefers specific dues. After a prolonged discussion, the commission proposed to elaborate a scale of *ad valorem* duties for medicinal preparations, to be submitted for consideration to the Minister of Finance.



## The Armstrong Case

At Hay, on February 17, the magisterial hearing of the case against Major Herbert R. Armstrong, remanded on February 3 on a charge of murdering his wife by administering arsenic to her, and of the attempted poisoning by arsenic of Mr. Oswald Martin (*O. & D.*, February 11, p. 40), was concluded. The expert witnesses called were Dr. Bernard Spilsbury, Mr. John Webster, and Sir William Willcox. Dr. Spilsbury deposed that the contents of sixteen jars sent by him to Mr. Webster included soil and turf surrounding the coffin of the deceased, together with packing material. Most of the organs of the body were in an unusually good state of preservation, considering the time that had elapsed since death. That was particularly noticeable in the case of several of the visceral organs. There was fatty degeneration of the liver and kidneys, which would be consistent with arsenical poisoning. In reply to the chairman, the witness said that no trace of the mixture given at the asylum four months before death—a mixture containing *m.v.* of liquor arsenici hydrochloricus in each dose—would have been likely to be found, with the possible exception of traces in the hair and nails. Mr. John Webster's evidence included details of the results of various analyses made by him. He examined the contents of a bottle which contained  $1\frac{1}{2}$  oz. of urine, and found  $\frac{3}{32}$  gr. of arsenic. He also examined a box of chocolates received, and found that two had the appearance of having been tampered with. A cylindrical hole nearly half an inch long had been bored and filled with white powder, which he found on analysis to be arsenious oxide. The amount in one chocolate was 2.12 gr. The other chocolate had approximately the same amount, but the other thirty apparently had not been tampered with. He analysed the contents of each of the jars received from Dr. Spilsbury, and found arsenic present in all the organs submitted to him. The total amount was 208.2 milligrams (3.2 gr.). In the wood shavings he found 0.26 mg. of arsenic, and in the turf and soil he received there was 3.5 mg. In one of the organs he found bismuth, and in the liver there was a possible trace of morphine. The witness had also received from the police authorities a hamper containing eighty-five articles. One of these was an envelope containing  $3\frac{1}{2}$  gr. of arsenic. A brown-paper packet labelled "Arsenic" contained 2 oz. of a grey powder, which he found to be arsenic coloured with charcoal. A tin labelled "Weed-killer" contained arsenic coloured with blue dye. A corked bottle marked "poison" contained about 3j. of a brown liquid with an odour of paraffin, which he found to be a strong alkaline solution of arsenic. A cognac bottle labelled "Poison—Weed-killer" contained about  $\frac{1}{2}$  fl. oz. of a light brownish liquid, which was also a strong alkaline solution of arsenic. Among the other bottles in the hamper were a large number which either contained or had contained homœopathic medicines. He had tested these for arsenic, and with the exception of two bottles he found none. Of these two, one was a 1-oz. bottle labelled "Arsen. Alb.," and in that he found arsenic amounting to 12.5 mg. in 3j. It would require over fifteen bottles to give 3 gr. of arsenic. The other bottle contained arsenic in the proportion of 5.6 mg. per fluid ounce. There were only a few drops of liquid in each of these two bottles. The Chairman: When arsenic is mixed with charcoal, would it be a comparatively easy process to remove that charcoal, say, by dissolving the arsenic out in boiling water?—No, it would not be an easy matter. It could be done?—Yes. Sir William Willcox, in reply to questions on the symptoms observed during Mrs. Armstrong's last illness, said that 2 gr. of arsenic is a possible fatal dose, and during the last few days of life an amount of arsenic in excess of 2 gr. must have been taken. He had no doubt that a quantity corresponding to a possibly fatal dose must have been taken within twenty-four hours of death. It was difficult to diagnose cases of arsenical poisoning during life and where there were no grounds for suspicion, as many of the symptoms of arsenical poisoning occurred in natural diseases or in cases of so-called ptomaine poisoning. In many cases the diagnosis could not be made with certainty

without an analysis of what left the body. He had also considered the evidence in the case of Mr. Oswald Martin, and he was of opinion that the cause of the illness was acute arsenical poisoning. The accused, who pleaded "Not guilty," was committed for trial.

## Personalities

MR. G. COFMAN-NICORESTI, a director of the Solidol Chemical Co., Mill Street, Dockhead, London, S.E. 1, has been elected a Fellow of the Chemical Society.

MR. HENRY A. POTTER (Potter & Clarke, Ltd., manufacturing chemists, Artillery Lane, London, E. 1) has been re-elected commodore of the Noré Yacht Club for the fourth time.

MR. A. J. WELLS, chemist and druggist, has joined the outdoor staff of Lorimer-Marshall, Ltd., manufacturing chemists, London, E.C. 3, and is representing the company in London and the suburbs.

MR. A. JERROLD-NATHAN, chairman of Barclay & Sons, Ltd., druggists' sundriesmen, Farringdon Street, London, E.C. 4, has been re-elected chairman of the special housing committee of the City of London, and has also been appointed to represent the City Corporation at the Royal Institute public health conference to be held at Plymouth next June.

MR. AND MRS. FREDERICK TUNBRIDGE, Reading, celebrated their golden wedding on February 20. Mr. Tunbridge passed the Modified examination in 1868, and in the following year opened at Reading as a manufacturing chemist. Mr. Tunbridge was the originator of Dr. Mackenzie's smelling-bottle and of "fly cemeteries." He is now assisted in business by his two sons.

MR. A. W. EDWARDS (R. W. Greff & Co., Ltd., chemical merchants, Queen Street Place, London, E.C. 4) has been elected a Fellow of the Chemical Society. Mr. Edwards was with the Bayer Co. from 1910 till the outbreak of war, when he joined the Army. After a varied experience he received a commission in the Special Brigade of the Royal Engineers. In April 1919 Mr. Edwards was gazetted out of the Army and took up an appointment with Messrs. Greff.

In an account of the spectacular reconciliation of Messrs. Frederick and Walter Melville, the lessees of the Lyceum Theatre, London, after a long estrangement, "The Evening Standard" of February 20 reports an eye-witness as saying:

For hours friends had been trying to persuade both brothers to come to an agreement. Mr. H. S. Watson, a tenacious Yorkshireman, had stuck to Walter like a terrier since the afternoon.

Pharmacists will be interested to know that this passage refers to Mr. Watson (T. H. Bateman & Co., Ltd.), the diplomatic Vice-President and treasurer of the Western (London) Pharmacists' Association.

MR. E. A. WEBB, deputy chairman of Evans Sons Lescher & Webb, Ltd., wholesale druggists, has written a history of St. Bartholomew's Church, Smithfield, London, E.C., of which he is churchwarden. The work, which is published at four guineas, in two volumes, by the Clarendon Press, is entitled "The Records of St. Bartholomew's Priory, Smithfield, and of the Church and Parish of St. Bartholomew-the-Great, West Smithfield." The first volume deals with the foundation and history of the Priory up to the suppression. The second volume describes in detail the fabric of the church and gives an account of the monastic buildings. Reviewing the work, "The Times Literary Supplement" pays the following tribute to the author:

Mr. Webb's family has been connected with the parish since 1828, when his grandfather came to reside in Bartholomew Close, and from number sixty his father and mother were married in 1844 in the church of the parish, for which Mr. Webb has an affection comparable to that which Stow had for the City of London. He himself has had the great advantage of constant association in his studies with the President of the Royal Academy, and this book is an example of family and local affection such as is not often to be seen in a great English city.



## Marriages

**BUCHANAN—STEWART.**—At Uxbridge, on February 11, Wilfrid James Buchanan, D.F.C., youngest son of the late Mr. William Buchanan, Elmknowe, Kirkintilloch, to Dorothy Grover Stewart, chemist and druggist, eldest daughter of the late Mr. James Stewart, chemist and druggist, Maitland Place, Kirkintilloch.

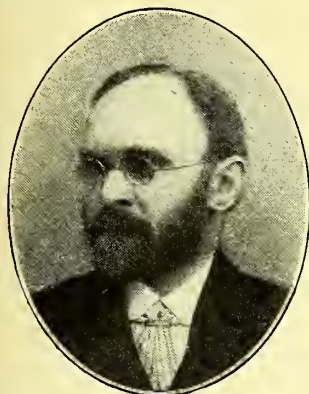
**COX—LUFF.**—At Old Radford Church, Nottingham, on February 21, Donald Hutton Cox, chemist and druggist (T. Roberts (Chemists), Ltd., Dresden, Longton), to Agatha Katherine M. Luff, Nottingham.

**JAMES—WILLIAMSON.**—At St. Paul's Church, Southville, Bristol, on February 4, Arthur James, chemist and druggist, manager to Timothy White Co., Ltd., Southsea, to Lilian Frances, eldest daughter of Mr. Williamson, Southville.

## Deaths

**APLIN.**—At 41 Hilpert Road, Trowbridge, on February 14, Alice Jane, the dearly beloved wife of Mr. J. H. Aplin, M.P.S.

**BENNETT.**—At Stockport, on February 15, suddenly, Mr. George Bennett, J.P., chemist and druggist, 19 Market Place and 98 Baxton Road, aged sixty-two. Mr. Bennett was for some years with the late Mr. Thomas Clarke, to whose business he eventually succeeded. When the Society of Chemist-Opticians was formed in 1904 Mr. Bennett was elected as its first Vice-President. He was also President of the Manchester and North of England Optical Society for ten years, and one of the founders of the National Institute of Ophthalmic Opticians; he had, in fact, taken up optics as far back as



MR. G. BENNETT, J.P.

the year 1879, and actively assisted in drawing up the petition which resulted in the establishment of a sight-testing diploma by the Spectacle Makers' Company. In his own borough he served on the town council for four years, and was a painstaking magistrate. Mr. Bennett was also a past President of the Stockport Tradesmen's Association and a prominent member of several religious, philanthropic, and other bodies. He is survived by a widow, four sons, and a daughter; the eldest son is Mr. T. Leigh Bennett, F.S.M.C., chemist and druggist, who has been a partner in the business for some time past. Prior to the interment at Disley Parish Church, on February 18, a service was held at Trinity Wesleyan Church, Stockport, attended by a large and representative gathering. The Stockport and District Pharmacists' Association was represented by Messrs. Thompson, Inglis, Gee, Taylor, Westerman, Huddleston, Arnfield, Mills, and Crossley; the Institute of Ophthalmic Opticians was represented by Mr. J. Harcombe Cuff and other members.

**CARROLL.**—At his residence, Main Street, Charleville, co. Cork, recently, Mr. James Carroll, Ph.C. Mr. Carroll, who was a native of Kilmallock, co. Limerick, passed the Licence examination in 1901.

**CUSSENS.**—At 33 High Street East, Dorchester, recently, Mr. John William Cussons, chemist and druggist (see p. 47). Mr. Cussons qualified in 1889. He removed from Pendlebury, Manchester, and purchased the business of Mr. A. H. Evans, J.P., at Dorchester, in 1910. He was a well-known Freemason, and was installed as Worshipful Master of the Lodge of Faith and Unanimity, No. 417, on January 9.

**DIXON.**—At The Pharmacy, Cottingham, E. Yorkshire, on February 8, Mrs. Ann Dixon, widow of the late Mr. William Dixon, chemist and druggist, aged eighty-eight.

**HAGUE.**—On February 14, after a few days' illness, Mr. Ernest Harold Hague, chemist and druggist, Peel House Pharmacy, Widnes, aged forty.

**JONES.**—At The Oaklands, Penn Road, Wolverhampton, on February 19, Mr. Edward William Taylor Jones, F.I.C., aged seventy-five. Mr. Jones was public analyst for Wolverhampton and Staffordshire, for forty-nine years, and acted in the same capacity during varying periods for Kidderminster, Newcastle-under-Lyme, Stoke-on-Trent, and Walsall. He is survived by a widow, two sons, and a daughter.

**O'TOOLE.**—Recently, after a brief illness, Mr. Peter Joseph O'Toole, M.P.S.I., Miltown Malbay, co. Clare, aged forty.

**SMITH.**—At Boston Road, Horncastle, recently, Mr. Henry Smith, chemist and druggist, 3 Bridge Street, aged seventy-five. Mr. Smith had carried on business in Horncastle for the past eighteen years.

**STEPHENS.**—At 87 Barcombe Avenue, London, S.W. 2, on February 3, Mr. Henry Isaac Stephens, chemist and druggist, aged seventy-four.

**STOODLEY.**—At Oketon, Teddington, on February 13, Mr. Edwin Edward Stoodley, C.B., late secretary to the Board of Inland Revenue, aged seventy-seven.

**TAYLOR.**—At Blackburn, on February 17, Mr. Frank Taylor, chemist and druggist, Lynthorpe Road, dispenser at the Royal Infirmary, aged twenty-five. Mr. Taylor served his apprenticeship with Mr. R. Lord Gifford, Ph.C., at his Bastwell shop; he subsequently became an assistant with Daniel Yates, Ltd., Darwen Street, and qualified in 1920. He is survived by his parents and his widow.

**WHITCOMBE.**—At his residence, The Lodge, Petersfield, recently, Mr. Charles Whitcombe, chemist and druggist, for many years in business at Chapel Street, Petersfield, and Market Square, Petworth, Sussex, aged seventy-nine.

**WHITE.**—At "Kensworth," Malcolm Road, Wimbledon, London, S.W., on February 10, after a long and distressing illness, Mr. Arthur Wellesley White, principal of J. M. Smith & Co., Hampton Chemical Works, Arthur Street, Old Kent Road, S.E. 15. The funeral took place at Merton Parish Church on February 14.

## Wills

**MR. THOMAS EMLYN REES**, chemist and druggist, Oxford House, Oxford Street, Mountain Ash, who died on November 2, left estate valued at £807, with net personalty £727.

**MR. JOHN MURISON**, chemist and druggist, Rothienorman, 15 Church Crescent, Muswell Hill, London, N., who died on December 20, left estate of the gross value of £6,184 8s. 1d., with net personalty £6,036 16s.

**SIR PERCEVAL ALLEYN NAIRNE**, solicitor, 176 The Grove, Camberwell, London, S.E., who was connected with the Seamen's Hospital Society and the London School of Tropical Medicine, and died on December 10, left £43,431 0s. 9d. Among the bequests are £200 to the Seamen's Hospital Society and £500 to Mr. Montagu Geo. Smith, dispenser at the Lewisham Union Infirmary.

**MR. GEORGE FREDERICK WINFIELD**, chemist and druggist, High Street, Solihull, who died on December 18, left estate of the gross value of £8,798 19s. 2d., with net personalty £5,314 12s. 9d. To his son William Heath Winfield he left the goodwill, plant, stock-in-trade, etc., of his business as a chemist, charged with the payment to his (testator's) widow of £400 per annum. He left £100 to his son William, and the residue of his property to his wife for life, with remainder as to £1,500 to his son Frederick Butwell Winfield, and the ultimate residue between his sons Frederick and William.



## Trade Notes

**BERKEFELD FILTERS**, Sardinia House, Kingsway, London, W.C. 2, invite chemists to apply for particulars of these British-owned filters.

**THE ALZA TOILET SPECIALITIES** yield 100 per cent. profit, states the advertisement in this number of the Alza Manufacturing Co., Chorlton-cum-Hardy, Manchester.

**HÉRA PRODUCTS**.—Walter E. Stokes & Co., 8 Woodstock Street, Oxford Street, London, W. 1, announce an advertising campaign in connection with Héra perfumery products.

**SYNTHETIC PERFUMES**.—Lee & Silverwood, 24A Fountain Road, Hull, send us samples of the synthetic otto and synthetic neroli which they advertise. The odours are characteristic and pronounced.

**MR. J. SERRAVALLO**, manufacturing chemist, Trieste-Barcola, Italy, proprietor of Serravallo's tonic, has appointed Mr. Alfred Willington, 8-10 Princes Chambers, Ann Street, Belfast, to be his distributing agent for Ireland.

**P. MELLIS & SONS, LTD.**, 60 and 62 Bunhill Row, London, E.C. 1, have been appointed sole agents for the British Empire for Waeger & Eichler, Brno (Czechoslovakia), Warsaw, Vienna, and Budapest, for the sale of all kinds of crude drugs and botanicals.

**ARCHIBALD'S OATMEAL CREAM**, advertised in this issue by Mr. F. E. Farmer, late Walton & Curtis, 190 Broadhurst Gardens, Hampstead, London, N.W. 6, is packed in collapsible tubes, and retails at 7½d. and 1s. 3d. It is a nicely scented, non-greasy preparation.

**WRIGHT'S LYSOL** has built up an enviable reputation as a standardised lysol, free from causticity and perfectly soluble in water. The wholesale and retail prices are given in the announcement in this number of Wright, Layman & Umney, Ltd., Southwark, London, S.E. 1.

**KAMFECT**, a series of preparations for air-purifying, disinfecting and moth-killing, is strikingly advertised in this issue. The Kamfect Co., 5 Lauderdale Buildings, Aldersgate Street, London, E.C. 1, offer to send free samples to chemists who apply for particulars of a special trade offer.

**DE LUZY**, the Paris perfumer, whose London office is at 3 London Wall, Avenue, E.C., makes a preliminary announcement of an advertising campaign in which there will be cash prizes for chemists, their managers and assistants, and the public. The details will be sent on application.

**ORGANO-THERAPY**.—Attention is called to the announcement in our last issue of the bacteriological products and vaccines manufactured in the research laboratories at Higher Runcorn of Evans Sons Lescher & Webb, Ltd., Liverpool and London. Particulars are there given of the Schick test for diphtheria.

**PEARS' BABY-POWDER**.—The latest member of the "Golden" series of toilet preparations made by A. & F. Pears, Ltd., 71-75 New Oxford Street, London, W.C. 1, is a baby-dusting powder. This is put up in metal square upright containers, gilded outside, and of the attractive appearance associated with the series. The baby-powder retails at 1s. 3d., and is good value.

**LEMON-JUICE SOAP**.—A perfect representation in soap of a lemon is the novel form in which Salomon's French lemon-juice soap is sent out. An illustration of the soap is given in the advertisement of Robert Ferber, Ltd., 98-104 Oakley Street, Lambeth, London, S.E. 1. The soap is made at the Parfumerie Centrale, Georges Salomon, Paris, and as an original French article should command a ready sale.

**NEW PACKING DEVICE**.—Tubes of tooth-paste and similar articles insecurely fixed on cards by means of a piece of cord are frequently a source of annoyance, but an arrangement invented by Thos. Christy & Co., 4-12 Old Swan Lane, London, E.C. 4, has overcome the trouble. The tube is packed in a triangular carton, which is fixed to the display-card by means of "tongues." The device is simple and effective, as, no matter how the card is

thrown about, the carton does not part company until removed in the orthodox manner. This style of packing is now being used by Messrs. Christy for tooth-paste, known as the "1922" series, which is obtainable in all the popular flavourings. Half a dozen tubes are fixed on a card.

**THE "SPELLAD" ADVERTISING MACHINE**, which is referred to in this week's advertisement pages, will be one of the novel exhibits at the British Industries Fair. This machine spells and exhibits any desired slogan, letter by letter, and the entire sentence, when complete, is slowly withdrawn, to reappear as before. The power is supplied by a small motor, which, it is estimated, works for fifty hours at a cost of about 6d. As a window attraction, the "Spellad" machine makes a strong appeal to the passer-by to stop for a minute and see what is happening, and the skill of the window-dresser, coupled with the aptness of the slogan, should result in—one more customer. The polished mahogany case forms a handsome centrepiece for the window, and goods may be displayed on the flat top and around the machine. A set of 100 letters is supplied, and the message may be altered in a few minutes. The Spellad Advertising Machine is, of course, a British invention, the proprietors being Wedekind & Co., showcard and advertising novelty manufacturers, 28 Cock Lane, London, E.C.

## Business Changes

**MR. E. PEACE**, chemist and druggist, has opened a pharmacy at Stocksbridge.

**MR. J. W. SAMPSON**, F.C.S., Ph.C., has opened a pharmacy at 3 Annesley Road, Hucknall.

**MR. W. BREDT**, chemical merchant, will remove on March 1 to 10 Fenchurch Avenue, London, E.C. 3.

**MR. J. W. TODD**, chemist and druggist, Camberley, has opened a branch at Hartley Wintney, Basingstoke.

**MR. T. RUSSELL**, chemist and druggist, Leigh, Lancs, has transferred his business from 73 to 61 Bradshawgate.

**MR. W. G. HINDHAUGH**, chemist and druggist, has commenced business at 203 Newgate Street, Bishop Auckland.

**THE business of the late Mr. A. J. Sheffield**, chemist and druggist, 34 Fore Street, Hertford, is being continued by his son, Mr. George S. Sheffield, chemist and druggist.

**J. R. BOURLAT, GOES & Co.**, powder-puff manufacturers, have removed to larger premises at 22 Prince's Road, Holland Park, London, W. 11. The telephone number is "Park 2592."

**MR. W. H. THORNE**, chemist and druggist, who was formerly with Wilcox, Jozeau & Co., chemists, Haymarket, London, S.W. 1, has acquired the business of Holt Green & Co. (Mr. J. H. Green, chemist and druggist) at 3 Pelham Street, South Kensington, S.W. 7.

## Information Department

### INFORMATION WANTED

- |   |   |
|---|---|
| B/162. "Julian" suspensory bandages             | S/191. Rouge de la Maxine                                       |
| W/172. "Artorp" flour                           | P/182. Portable water-softener (made on vacuum-flask principle) |
| S/172. Capsuling machinery (makers in France)   | H/212. "Persian Night" Perfume                                  |
| S/162. Carnot Frères specialities (agency here) | B/202. Aymard's milk steriliser                                 |
| N/222. Fresh sea-water for medicinal purposes   | B/142. George's Drops (for caged birds)                         |
| G/222. Serre (Montpellier) Cream of Tartar      | B/212. "Plumpers" for filling out sunken cheeks                 |
| S/12. Vinosol.                                  | B/232. "Diana" hair dyes  |

### INFORMATION SUPPLIED

- |                                   |                                       |
|-----------------------------------|---------------------------------------|
| Burgess's Lion Ointment, P/142    | Lisonel, B/202                        |
| "Cyko" photographic papers, K/202 | Melrose tablets, B/222                |
| Dols' flannel, S/132              | Mixing machinery, L/132               |
| "Elephant" brand combs, B/217     | Original Crêpe Velpau bandages, B/222 |
| Enamelled iron signs, E/92        | Pill vials, P/212                     |
| Lectona, A/132                    | Solac milk products, B/162            |
|                                   | Solyptol Soap, L/152                  |



## Observations and Reflections

— By Xrayser II.

### Mr. Hill's Definition

of the word "chemical" strikes me as the best I have yet seen. It is a little cumbersome, but the difficulty of including everything that is essential and excluding everything that is not is great. "Fine" in this connection is still harder to define, and Mr. Hill is hardly so successful with it; indeed, a strict definition is probably impossible. "Chemical" does not labour under the disadvantage of being used, as "fine" is, in more than a dozen different senses, some of them not very obviously related to the root meaning of the word, which seems to have been "to finish" (compare the substantive "fine," equivalent originally to *finis*). In an old and composite language like ours, in which almost every word has developed meanings often widely different from and sometimes directly opposite to each other, definitions are peculiarly difficult. Coleridge is said to have declared that it is impossible to speak the truth in French, and we may say that it is very easy to be misunderstood in English. Fortunately, it is possible to know a fine chemical without being able to define it, though experts appear to differ a good deal even on that point. The possibility of an authoritative decision of the other, at least on etymological grounds, appears, if I may be allowed the quotation, to get "fine by degrees and beautifully less."

### Rumours

have reached me of a tendency to unfairness on the part of some examiners in going beyond the syllabus for the Qualifying examination. They are rumours only, and I don't know what ground, if any, there is for them, but one case at least has been described to me in such detail that I feel justified in calling attention to the matter. If there is any cause for the complaint it ought to be removed, and if there is not, the opportunity of reassuring candidates ought to be welcomed. There is certainly a danger that examiners who are experts and specialists in any particular subject and have no practical knowledge of the trade and its requirements may push beyond the mark without realising that they are doing so, and demand of a candidate more knowledge than ought to be expected of him. I have little doubt that this is sometimes done, and as it is obviously difficult for the victim to protest without endangering his prospect of a "pass" a check ought to be put by the Pharmaceutical Society upon such misplaced zeal. In the case I have referred to questions were put which were quite outside the syllabus, and the candidate's inability to answer them was apparently noted against him. This may have been an isolated case, and the man may have failed to pass on other counts, but such questions should not be asked, as they are certain to disconcert the examinee, and every case of the kind should be reported. I have no doubt the columns of the *C. & D.* would be open to any complaint of the kind that was properly authenticated.

### The Lemonade Crystals

case, though it ended happily for both proprietor and vendor, reflects, not very favourably, upon the custom, too frequent in our calling, of giving popular but inaccurate names to preparations offered to the public. As producing "a refreshing drink with characteristics of the lemon," the substitution of tartaric for citric acid may be defensible, but if one were to say that it contains all the virtues of the fresh lemon it would be to go a little beyond the limits of strict truth. "Lemonade Crystals" is, I think, a misleading title when the crystals are those of tartaric acid flavoured with oil of lemon, for it is virtually equivalent to lemon crystals, and would, I think, in nine cases out of ten be understood so by the purchaser. The description of the drink quoted above might, of course, be read as a qualification warning the consumer that the crystals were a substitute for those of lemon juice, but probably they were not taken in that sense by most people. I recently suggested the name "Lemonade powders without lemons"

for such preparations as this, and to that I see no real objection, but we ought to avoid the use of any title or description that can by an ingenious lawyer be construed as fraudulent.

### An Influential Pharmacist,

in a private letter queries my remark that possibly no good would be done by a contested election to the Council this year. He thinks a change of *personnel* so desirable that the hope of obtaining it is a sufficient motive for a fight, and says he is speaking for others as well as for himself. He does not think it "the will of Heaven" that anybody should sit upon the Council for the term of his natural life, and indicates one or two of the retiring seven who in the opinion of most of his acquaintances, though not in their own, have sat long enough. Well, I agree heartily, and must confess that my previous note on the subject was written in a mood of weak good nature. I think I may plead that this is an unusual mood with me. Change for the sake of change is sometimes good; new blood may be no better than old, except in being new, but that of itself is an advantage, and in the present case there would certainly be no difficulty in replacing the old with new of a better quality. If three or perhaps four (but no more) good men would come forward I have no doubt they would be sufficiently well supported, and they would give us a chance of making our mind on certain topics known to the Council in a more effective way than by mere academic discussion. The Council itself, indeed, should welcome the suggestion, for there is just a possibility that the interest of the trade may be shifted from the Society to the Retail Pharmacists' Union if it is not kept up by a little "scrap" now and then. A contest would at least show that we still have the welfare of the Society at heart.

### The Same Correspondent

broaches the subject of the trade in patents, the inordinate proportions of which he, like myself, regrets. That we are ourselves to blame is beyond question; we have been too ready to push other people's preparations instead of our own, lending our windows to their shows at ridiculously low rates, and often overburdening ourselves with stock in addition. A complaint on this head reaches me from another quarter. It has happened more than once lately that the price of an article of which we have been induced to take an unusually large stock for the purpose of window-display has been lowered considerably without notice before a third of the stock has been disposed of. It is true that a rebate is made for the stock not sold at a certain date, but the time allowed is too short for the whole of the stock to be disposed of, and what is left has to be sold at a loss. I ought to say that under the head of patents I have been speaking of proprietaries in general, and that I do not refer to Glaxo, the proprietors of which do not-name any time-limit to their allowance.

### Your Correspondent,

"A Barrister-at-Law," is quite right in what he says in answer to the question, "What is quackery?" except that he quotes as from the New English Dictionary a definition of "quack" which does not occur in that work in the form in which he gives it; but he only repeats what has been previously said in these columns, and does not appear to have understood that my question was merely a rhetorical one. I am glad, however, that he lays stress upon the fact that the term "quackery" refers not to the intrinsic value of a medicine, but to the way in which it is recommended by the proprietor; for this is precisely the point of my note of February 11. The note was simply a protest against the pretension that a firm which boasts that its medicines are advertised beyond precedent is "out to kill every suspicion, every savour of charlatanry." Johnson refers to Addison for a definition of a quack as "one who proclaims his own medical abilities in public places." The more modest, the less boastful we are in recommending our own wares, the more likely we are to avoid the imputation of quackery.



# "SANITAS" EMBROCATION

SHOULD BE STOCKED  
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### The Shellac Scarcity

DEVELOPMENTS in the statistical position of shellac in London for some few weeks past, or since the astonishingly heavy warehouse deliveries of over 7,750 cases disclosed for last month, which were but little short of the stocks carried into this month, have excited considerable



attention. These considerable encroachments, which have been made upon the stocks this month and which up to February 16 represented about 3,120 cases against landings of only 1,136 cases, certainly emphasise the fact that the market is now confronted with a scarcity which looks like proving very acute. Discussing the shellac outlook in our editorial columns of January 14, we pointed out the strikingly progressive rate of the deliveries for the past two years compared with the two pre-war years 1912 and 1913, and we suggested, in spite of the abnormally low deliveries for December of about 3,030 cases, that statistical possibilities were once more in the direction of a renewed marked depletion of the London stocks. There has been ample evidence of this since. The rapid mounting-up of the stocks during December last to the extent of some 4,000 cases to 11,000 cases proved, indeed, very deceptive and short-lived, and it is thus not surprising that the market was at that time not much affected by such a development. Taking the deliveries for the two months—December and January—the aggregate was about 10,750 cases, or a monthly average of 5,375 cases, which compares with 4,451 cases and 4,189 cases respectively for the whole of 1921 and 1920. The total deliveries for this month will probably be well under the exceptionally big returns for January, but should prove to be again large at anything between 5,000 cases and 6,000 cases, and as the receipts may be expected to be very light, another big hole, perhaps as large as for January, will be disclosed in the stocks, the total of which may easily drop to a new low record. A persistent drain seems inevitable in the near future—in fact, the balance available threatens to dwindle to quite negligible proportions, and it is only natural that the minds of market operators have begun to be exercised by this contingency. The outlook for the consumer is thus anything but pleasant, and there is unfortunately not much chance of equilibrium between supply and demand being restored, inasmuch as new factors have sprung up just lately which are calculated to intensify the prevailing scarcity and hinder the consuming markets in keeping pace with current large requirements. The railway strike troubles in India are undoubtedly interfering with the movement of supplies from the Interior and the progress of the shipments from Calcutta, and this happening at a time when increased supplies are badly needed by shippers against their current contracts, will tend to reduce the quantities afloat to very small dimensions. The position of the American market, at the same time, has also been rendered more stringent by the fact that the steamer "Romeo," which cleared from Calcutta on January 3 with about 3,000 cases for American ports, has been reported on fire, and no little anxiety has been aroused among American importers with regard to this large cargo. Possible losses of part of this shellac, and at least a delayed arrival, is a matter which has had already a marked effect on the temper of the London market within the past week. The next large consignment to reach America left Calcutta ten days later with about 2,300 cases, and no other consignments have been so far reported to have been shipped from the primary source. The quantities afloat to European ports are extremely light, and it will thus be realised that the outlook as to prospective incomings is rather precarious, and that the replacing of stocks now parted with to consumers on either side of the Atlantic will present almost insuperable difficulties for some time to come. This extraordinary aspect of the situation has precipitated a strong and lively market during the latter part of last week, with prices

lifted to a further substantial extent to fully 350s. per cwt. for spot and near delivery, as well as for March contracts. The rise in c.i.f. costs for shellac afloat to the level of the spot value is a striking feature, and has induced holders of spot parcels to enhance their views. That America has been eager to place further orders for direct shipment from Calcutta was only to be expected, and under the fear of "famine" conditions she has likewise had resort to this market for good quantities for prompt shipment, while efforts have been made to get parcels afloat intended for London diverted or transhipped to New York in order to cope with the execution of urgent contracts outstanding. Where the use of shellac is absolutely essential the question of price has perforce to be overlooked, and as the run on the very limited supplies is apt to become more insistent than ever under present unprecedented conditions of scarcity, the market shows symptoms of getting rather out of hand. Stock-are, so far as can be gathered, in few hands, and held tenaciously, and, in spite of the comparatively high prices ruling, the premium on spot delivery is not unlikely to be raised considerably further, especially in view of the strength of the market in forward deliveries. The market at the primary source has assumed a rather excited aspect, while the carrying out of shipping contracts entered into at considerably lower prices will presumably be handicapped by the railway difficulties. Until quite recently speculative operations at this end were carried on on a modest scale, and on frequent occasions in the latter part of the past year attempts were made to take liberties on the "bear" tack at prices which were considered somewhat unduly inflated, but it is hardly likely that any important short commitments will be entered into under the severe depletion that is now going on until more normal shipping facilities become manifest at Calcutta. The fact may be recalled that only about two months ago sales were made against the usual contract for T.N. Standard quality down to 270s. per cwt. for spring delivery, the value of which now would show an appreciation of over 70s. against the original sellers, although the rise in the value of spot delivery since has been roughly only half that amount. The finer grades of shellac are getting very scarce, and prices in that direction range nominally up to about 420s.

### Proprietary Preparations in Poland

SINCE the Armistice the manufacture and sale of pharmaceutical specialities have been the object of fresh legislation in a number of countries, in the Old and the New World, including an abortive attempt undertaken with the same object in our own country. The new Polish State, which enjoyed the doubtful advantage of possessing three distinct sets of regulations dealing with this matter, i.e. Russian, Austrian, and Prussian, has decided that the time has come to introduce uniform legislation, and curiously enough the Minister of Health, who is the author of the new regulations, bases his right to do so on powers conferred by former Austrian and Russian laws, which Poland has accepted as a legacy together with the territories acquired from both States. The new Polish regulations show the influence of recent legislation in other countries, many features of which have been incorporated, in addition to certain new provisions. To some extent all recent legislation in foreign countries affecting the sale of specialities has resulted in shifting the burden of responsibility from the pharmacist to the manufacturer. We must not lose sight of the fact that in the Continental



countries the pharmacist alone is responsible for the composition, etc., of all preparations sold by him, and where a proprietary preparation does not comply with some provision embodied in the pharmacy laws the pharmacist is punished and cannot claim redress from the manufacturer. Pharmaceutical specialities are defined as remedies produced by chemical or mechanical means and put up in a form ready for sale to the public, or in a distinctive package. This does not apply to serums, vaccines, and other bacteriological preparations, nor to dietetic products, provided no medicinal qualities are ascribed to the latter. Pharmaceutical specialities may be manufactured by pharmacists in their own businesses, or in factories licensed to prepare galenical preparations. Proprietary medicines must comply with the following requirements: (1) they must not be liable to decompose on prolonged storage; (2) their composition may not resemble that of mixtures included in the national or any foreign Pharmacopœia; (3) they must possess the therapeutic properties claimed for them by their producers. The manufacture and sale of a speciality in Poland requires a licence, to be issued by the Minister of Health; in the case of specialities for veterinary use, consent of the Minister of Agriculture is also required. To obtain the necessary licence, an application must be addressed in the first instance to the State Pharmaceutical Institute in Warsaw, which will transmit it to the Minister of Health for his final decision. The application must be accompanied by: (1) two packages of the preparation in the form in which it is intended to place it on the market, or a sufficient quantity to enable a complete analysis to be made; (2) designs of the labels and proofs of the enclosures, advertising matter, etc.; (3) in the case of compounded preparations, a sufficient quantity of the single ingredients must be submitted to permit of their analysis, and also to enable the preparation of the product itself by the laboratory from the samples of its ingredients submitted for examination; (4) a complete description of the preparation, with disclosure of the formula and method of manufacture, as well as directions for use. The disclosure of the method of manufacture will be treated as confidential. Manufacturers of specialities are required to keep a special register, in which they will have to enter the amounts produced and the quantities of ingredients used in the process of manufacture; in addition every sale to wholesalers will have to be entered, with particulars of the quantity supplied, the address of the purchaser, and date of delivery. Pharmaceutical specialities are required to bear a label containing the following particulars:

Name of the preparation.

Name and full address of the manufacturer.

Statement of the active principles; if potent drugs are present, the amount must be stated.

Directions for use.

Registration number in the following form: "Nr. registr. M.Z.P. . . ."

The statement "to be sold only on a prescription" if this proviso is contained in the licence.

The sale price to the public in Poland.

The sale price must not exceed the charge allowed by the drug tariff. However, should the manufacture of the preparation entail special operations, this price may be exceeded by permission of the Minister of Health. The printed sale price is binding on the retailer, and no higher charge may be made. Advertisements referring to specialities must be strictly truthful, and may not contain any statements likely to mislead the public. It is forbidden to make use of testimonials from patients or from "owners

of animals." All advertising material, pamphlets, labels, etc., must be approved by the Minister of Health prior to their use or distribution. Pharmaceutical specialities which may be supplied only on a prescription may be advertised only in medical, pharmaceutical, or veterinary journals. The importation into Poland and sale in the Republic of foreign specialities is permitted only after compliance with these regulations; that is to say, an application for a licence has to be made in the same manner as for national preparations. The regulations also provide for a periodical control of all the specialities on the Polish market. To this end the State Pharmaceutical Institute is empowered to require, once every year, from any pharmacist or wholesale house, the delivery of the necessary packages of each speciality to carry out its analysis. The manufacturer of the preparation, or, in the case of foreign specialities, the manufacturer's representative in Poland, will be notified of the fact, and within two weeks of the receipt of such notification must replace the packages supplied to the Institute for analysis. Within this period of two weeks he must notify the State Pharmaceutical Institute that the said number of packages have been duly delivered to the pharmacist or firm in question, and at the same time must pay the prescribed fee for the control analysis. As in Austria and in Spain, an exception is made in favour of those specialities which are put up by individual pharmacists for sale exclusively in their own business. These do not require a licence or registration; the pharmacist is merely obliged to make the necessary statement to the district authorities, who are required to permit, or forbid, the sale of any such private specialities within a period of twenty days from receipt of the notification made by the pharmacist. These new regulations came into force immediately on publication—a fact which British manufacturers of specialities exporting their preparations to Poland would do well to note, in order to comply with the new requirements. For some reason which is not disclosed, they apply to the former Austrian and Russian territories now incorporated in the new Polish State, but not to the former Prussian territories, where the German regulations still operate. The Polish regulations have much in common with recent Austrian and Spanish legislation on proprietary medicines, and the influence of the English Proprietary Medicines Bill is apparent in the prohibition of the use of testimonials. While no quantitative disclosure on the label of the composition of the preparation is required, except in the case of potent drugs, the fullest details are demanded from the manufacturer, this information to be of such a nature as will enable the State Pharmaceutical Institute to prepare itself the preparation for the purpose of verifying the manufacturer's statements. The obligation by the manufacturer to keep a record not only of his production, but of all his supplies to wholesalers, is also a new feature. In compelling the manufacturer to calculate the sale price of a speciality on the basis of the charges established in the drug tariff, Poland has adopted the Swedish procedure. In view of the very frequent alterations in these charges, due to the fluctuations of the Polish exchange, this point is likely to be a source of trouble.

### Reducing Local Expenditure

THE comments which we made last week (p. 56) regarding wasteful national expenditure apply with equal force to local expenditure. There is a good deal of waste of ratepayers' money spent by borough, county, and local councils, boards of guardians, etc. There is room



for the services of business men on these public bodies who shall have a real interest in promoting the economy of public funds. Many chemists already serve the public in this way, but there is room for more workers. One difficulty which is felt is the increasing apathy of the local electors, a spirit which has been promoted by a realisation of the helplessness of the average voter. If, however, it is remembered that when many voters think alike something can be done in local affairs much more easily than in national politics, some of this indifference would be dissipated. The London County Council election on March 2 is a case in point. If every London chemist would record his vote and influence the people with whom he comes in contact to do the same the control of the expenditure of the London County Council would be more in the hands of the ratepayer. At present only a small proportion of householders elect representatives to this important local body. Will London chemists do what they can to promote interest in local public bodies?

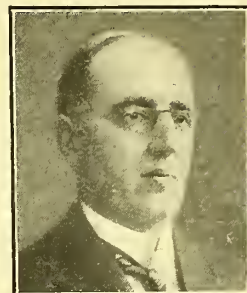
### Handicapping British Trade

THE effects of ill-conceived legislation such as that regulating the export of morphine, opium, and cocaine are far-reaching. In a case which has been brought to our notice a Spanish purchaser of preparations containing the drugs mentioned has actually been obliged to cancel his order to a British house and give it to one of the countries which are not hampered by a maze of export regulations. It appears that if a British manufacturer wants to send to Spain preparations containing any morphine or cocaine he has to fulfil a large number of Spanish regulations because Great Britain has concluded an arrangement with Spain regarding the trade in these drugs. These include a certificate from the Spanish Government approving the importation, and involve a long series of inspections and official visits. The point of the complaint is, however, that if the Spanish customer orders the good from Germany, Switzerland, and some other countries there are none of these formalities to be observed. Is it to be wondered at that Great Britain is losing trade? The least our Government can do is to give our exporters an equal chance with foreigners. The Home Office is well aware of the disadvantages of the regulations, but after communicating with the Foreign Office and adopting other delaying tactics the Home Secretary refused to smooth the way for British manufacturers. We hope some member of Parliament will question the Home Secretary in the House of Commons on the subject of the serious restraint on British trade caused by this undigested legislation.

PARIS SOCIETY OF PHARMACY.—The January meeting of the Paris Society of Pharmacy is usually interesting on account of the change of office-holders and the account of the last year's proceedings read by the secretary. An additional feature this year was the formal announcement of the award of the Society's medals to MM. Cribier and Hubert. Both recipients were present, but the fact that the medals could not be struck in time prevented the presentation from being made. M. Bougault complimented the winners of the prizes and then made his farewell speech. His successor is M. Lafay. M. Lafay, 1922 President, keeps open shop in the rue de la Chaussée d'Antin. His remarks on the daily difficulties of the retailer (Dangerous Drugs Act, Codex standards) were listened to with interest. Professor Grimbert, the new general secretary, is director of the Central Hospital Pharmacy. He read a paper on his recent experiments in collaboration with M. Malmy on the solubility of iodine in chloroform. M. Richaud contributed a paper on methods of the physiological control of adrenalin products (Cushny's method). His conclusions were criticised by MM. Tiffeneau and Délepine. M. Tiffeneau then spoke on official glucoside of strophanthus, and said that crystallised and amorphous strophanthins did not exist from a commercial and industrial point of view. Their production in a pure state is difficult to show. Their use was general and official in the United States, and they could hardly be struck off the list of medicaments, but he saw no reason why they should figure in the Codex.

## London County Association Dinner

THE annual dinner of the London County Pharmaceutical Association was held at the Connaught Rooms, W.C., on February 16. The reception given by the genial President (Mr. W. E. D. Shirtliff) and his wife was by way of being a study in geometrical progression, most of the guests arriving, with the habitual shyness of London pharmacists, during the last ten minutes. The repast was of the excellence customary at the Connaught Rooms, and the musical programme was also of the nature, substance, and quality expected, some of the ventriloquial references to pharmacy and the Pharmaceutical Society causing great merriment. Supporting the President at the head table were Dr. R. J. Farman (secretary of the London Panel Committee), Mr. Thomas Batey (clerk to the London Insurance Committee), Mr. E. T. Neathercoat (President of the Pharmaceutical Society), Messrs. A. R. Keith, A. R. Melhuish, and Herbert Skinner (members of the Society's Council), Mr. G. A. Mallinson (secretary of the Retail Pharmacists' Union), and other guests. The spur tables were presided over by the Presidents of the constituent London associations, Mr. H. S. Watson, Vice-President of the Western Pharmacists' Association, acting for the President of that Association, who is also President of the London County Association; and the list of Presidents was completed by Mr. Thomas Marns, Ealing. Among the general company we noticed Messrs. J. Agnew (Wright, Layman & Umney, Ltd.), G. B. Barnard, R. R. Bennett, G. Duncan Bowie, T. M. Ford (S. Maw, Son & Sons, Ltd.), Roger K. Harvey (The British Drug Houses, Ltd.), H. S. Kutnow, Harry Martin, C. A. Noble, J. Royle, P. Sparks, G. A. Tocher, B. R. Wilkinson, A. J. Wing, and representatives of several wholesale houses not otherwise enumerated. It was a cheery gathering, and the after-dinner speeches were all redolent of hearty good-fellowship and merciful as to length. Dr. Farman, in proposing the toast of "The Pharmaceutical Society," introduced himself effectively by remarking that Mr. Neathercoat and he both came from the city of Ely, where during his apprenticeship he had made almost every preparation in the Pharmacopœia. Mr. Neathercoat, in reply, remarked that pharmacy had lately had a domestic change of its own. The Pharmaceutical Society, he said, had been forced into new systems of organisation, and stood more firmly than ever for all who hold the pharmaceutical qualification. Changes were coming on which had forced the Society to change its educational policy. Mr. Thomas Batey moved the gathering to enthusiasm, in toasting the London County Pharmaceutical Association, by giving statistics of the number of prescriptions dispensed in London up to December 1921—44,000,000—and the number of complaints substantiated against chemists—forty-four. The President responded in a few sincere and eloquent sentences, announcing incidentally that apologies for absence had been received from Sir William Glyn-Jones and Mr. John Keall, chairman of the Executive of the Retail Pharmacists' Union. Meetings of all kinds of pharmacists in one gathering, the President urged, do good. The final toast, that of "The Ladies and Visitors," was proposed by Mr. Herbert Skinner, who, in coupling with it the name of Mr. G. A. Mallinson, paid him the signal compliment of calling him "one of ourselves." Mr. Mallinson's brief reply revealed a subtle sense of humour that should prove a valuable asset to the R.P.U. On this pleasant note the speeches ended.



MR. W. E. D. SHIRTLIFF



## Cream of Tartar Inquiry

THE consideration of the application to have cream of tartar, tartaric acid, and citric acid removed from the list of goods which the Board of Trade has issued as dutiable under Part I. of the Safeguarding of Industries Act, was resumed on February 16. The previous hearings on February 4, 11 and 13 were fully reported in *THE CHEMIST AND DRUGGIST* (February 11 and 18).

Mr. C. A. Hill, B.Sc., F.I.C. (managing director of The British Drug Houses, Ltd.), continued his evidence-in-chief. He said he had been over the works of Kemball, Bishop & Co., Ltd., and had there seen the various processes of manufacture of cream of tartar, tartaric acid, and citric acid, and he considered they all came within his definition of a fine chemical. Sir Arthur Colefax objected to this evidence, and suggested that it was not a proper question to ask the witness. The Referee said the witness ought more properly to be asked what he saw there. Mr. Courtney Terrell, for the opponents, said that the French witnesses did not give details of their process, but confined themselves to the amount of supervision required. He was going to call evidence from Germany of what was done there in regard to the manufacture of these substances, and the witnesses who would give evidence about that had also seen the British works and would say that the process was the same. The Referee said he wanted helping on the question of supervision, and to ask the witness whether the process he saw came within his own definition of a fine chemical would have no bearing with him (the Referee). Mr. Hill then gave a rough outline of the process employed at Kemball, Bishop & Co.'s works in the manufacture of tartaric acid and citric acid. He said they started with the raw material, argol, and treated it until it got gradually less and less impure, examining it meanwhile from time to time. The process involved chemical changes, and he saw samples taken from the vats from stage to stage and sent to the analytical laboratories. There is a chief analytical laboratory and small laboratories in the works themselves to save the trouble of sending the various samples a long way to the head laboratory. The process of purification went on until they got a white liquor, which was evaporated down in vacuum apparatus of special construction, yielding a pure white powder. In the case of tartaric acid they got a white solution to finish with, which was evaporated down and yielded a white powder. He saw filters, evaporating-pans, filter presses, and, generally, modern plant in the works. Then he went into the chief analytical laboratory and saw voluminous records of tests made of the raw materials and of the product in the various stages of manufacture. The operations throughout were controlled by the results from this head analytical laboratory. In general, this description applied to the manufacture of all three substances.

The Referee: The inference I draw from what you have said so far is that the control is really from the laboratory.

Mr. Hill said the chief control was, but there were also the small works laboratories which he had mentioned, where the chemists made the tests of the product from stage to stage. There were also supervising chemists in the works. In fact, the whole of the processes were controlled by chemists, and from his experience these were fine chemical processes. These men were properly trained chemists, and were not the type of man who could be regarded as a foreman. In fact, the process as he had seen it could not be carried out by an unskilled staff, and he could not conceive these substances being made by unskilled men if a B.P. standard of purity was to be obtained.

### MR. HILL CROSS-EXAMINED

Sir Arthur Colefax opened his cross-examination by asking what was meant by "unskilled staff." Mr. Hill replied that he meant people who were not trained chemists, and who could not make an analysis. Sir Arthur Colefax said he suggested that it was possible to

carry on the manufacture of any one of these three substances without a chemist on the premises, and that an analysis of the final product could be made by an outside firm of analysts, as had already been mentioned during the course of the evidence of his witnesses. Mr. Hill reiterated that he could not conceive the substances being made in that way commercially in order that they could be put continuously on the market. Neither did he think it could be said that the process could be carried out in such a way that there was no appreciable risk of impurities getting in, even if the raw materials were bought on analysis. There were possibilities of impurities from reagents. He admitted that the only reagent, so far as he could say with his limited knowledge of the manufacture, was sulphuric acid, but it was not his experience that that could be bought free from lead, although later he agreed that it might be bought sufficiently free from lead and arsenic for the purpose of manufacturing these substances. Nevertheless, there would be impurities during the course of manufacture, and it required a chemist on the works to detect them. Sir Duncan Kerly said that as a matter of fact sulphuric acid for this purpose was delivered in lead tanks. Mr. Hill said that his experience was that impurities accumulated during manufacture, and that so-called lead-free sulphuric acid did contain traces of lead. Sir Arthur Colefax said the test for lead was a simple colour test, and that could be carried out by an unskilled person. Witness would not agree, because the colour of the liquid was very deep, and it was not until near the end of the process that a match could be made by an unskilled person. In the earlier stages it was a difficult process to make a colour test. In answer to further questions, Mr. Hill said that he did not see tests made at the works when he was there, but he saw the samples taken out at various stages and sent to the laboratory, and he saw the records of previous tests in the laboratory, where there were all the facilities for fine-chemical manufacture as he understood it.

Sir Arthur Colefax then put questions with regard to the Association of British Chemical Manufacturers. He produced the directory issued by the Association in 1919, containing the list of members, and said that he did not find the name of the Phoenix Chemical Co.—one of the opposing firms—under the classified heading of citric acid, but he found them under the headings of cream of tartar and tartaric acid. It was explained to Sir Arthur that Kemball, Bishop & Co. did not become members until later in 1919, after that directory was issued. It was then put to witness that although there was an advertisement of the Phoenix Co. in the directory, no reference was made to fine chemicals in it. A list of chemicals was mentioned, but they were not referred to as fine chemicals. Looking at the subdivision of fine chemicals in the directory, counsel said that there was no reference under it to any of the three substances in question now. Mr. Hill said that was the first list which the Association had published, and a new one was in the press at the moment. At the time the original one was published the thing had not been gone into so thoroughly as it had since, so far as the actual substances were concerned; but the definition laid down in his own article in 1916 had been adopted by the Association immediately it appeared and was set out in the articles of association. Sir Arthur Colefax then produced a brochure setting forth the objects of the Association, and pointed to a number of substances in other groups than Group 6 (fine chemicals) which he suggested were fine chemicals. Mr. Hill agreed there might be some, such as the rare earths. Questions were then put as to what Mr. Hill thought should be the proportion of skilled labour to the total labour in the manufacture of fine chemicals. Sir Duncan Kerly said he would call a witness who would give the exact proportion. Sir Arthur Colefax said that would be evidence in regard to only one works. He was asking a general question. The Referee said Mr. Hill was just the sort of witness he wanted. He was different from the very expert witness in the sense that he was between the expert witness and the practical man, if he might put it that way, and he would like his views on this subject. Mr. Hill, however, said he had no experience of actual manufacture.



## COUNSEL AT LOGGERHEADS

At this stage Sir Arthur Colefax and Sir Duncan Kerly came badly to loggerheads. Whether it is the strain of carrying on these cases at odd times or not, it is difficult to say, but there does seem to have been a degree of irritation in certain quarters, in more than one of the cases, which is unusual. Sir Arthur Colefax resumed his cross-examination by calling attention to certain passages in the article by Mr. Hill in 1916, in which were set forth what were then thought to be the general characteristics of a fine chemical. Mr. Hill agreed that, broadly speaking, it was true to say that a fine-chemical manufacturer was a man turning out a number of products, but he adhered to his original opinion that cream of tartar, tartaric acid, and citric acid cannot be manufactured on a commercial scale of B.P. purity unless there is skilled control throughout. Sir Arthur Colefax referred to aspirin, phenacetin, and sulphonal as requiring a higher degree of chemical skill in manufacture than even cream of tartar. Mr. Hill pointed out that the substances mentioned were synthetic, whereas the other three were not. Questions were also put as to the high degree of skill required in soap factories and breweries, but witness said that was taking him out of his depth. Sir Arthur Colefax said that the degree of chemical skill employed at Crosfield's soap-works was every bit as high as had been suggested was necessary for fine chemicals, and yet soap could not be called a fine chemical. Mr. Hill was willing to agree that it was as high, but he added that in his opinion chemical supervision was necessary at every stage of manufacture in the case of cream of tartar, etc., whereas in a soap-works he imagined the chemical supervision would be generally over the whole works, because the individual operations were more or less standardised. Similar questions were put with regard to breweries and the hydrogenation of oils, and it was therefore suggested to witness that the mere fact that a substance required a high degree of chemical skill in its manufacture could not be said to bring it within the definition "fine chemical." Producing a list of the chemicals sold by The British Drug Houses, Ltd., Sir Arthur Colefax drew attention to the fact that there was no division for fine chemicals, and witness said there was no classification of that kind. There were, however, very few what he would call heavy chemicals in the list at all. Sir Arthur Colefax: Why do you say that cream of tartar is a fine chemical?—Because it is produced to a very high degree of purity and has to satisfy very stringent tests for the absence of deleterious impurities. Also because it is used in medicine and enters into foodstuffs, and is manufactured under conditions which, in my opinion, fall within the limits of fine-chemical manufacture. It is a Pharmacopœia product and a pharmaceutical chemical.

Sir Arthur Colefax suggested that 25 per cent. of the substances in the British Pharmacopœia were not fine chemicals, and asked witness to give a guess at the number of heavy chemicals that existed. Mr. Hill said he hated guessing, but he finally agreed to a figure of about fifty, although he said he was doubtful on which side of fifty he should go. The Referee: You would not suggest that every pharmaceutical chemical is a fine chemical? Mr. Hill said that if it were undoubtedly a pharmaceutical chemical and given internally, he thought it would be fine. There might be exceptions, because the terms were not absolutely rigid. Sir Arthur Colefax said that cream of tartar was not always sold at B.P. purity, although the other two substances were. The test for sodium bicarbonate in the B.P. was every bit as stringent as for cream of tartar, and yet sodium bicarbonate was not a fine chemical. Indeed, the limit for lead in the case of sodium bicarbonate in the B.P. was 5, as against 20 for cream of tartar.

Mr. Hill said there was also a sodium bicarbonate on the market which was classed as a fine chemical for pharmaceutical purposes, but he agreed that it was a heavy chemical if it satisfied the B.P. test.

The hearing was then adjourned until the following day.

## FRIDAY'S PROCEEDINGS

Mr. Hill was re-examined by Sir Duncan Kerly. He said that the grouping of the members of the A.B.C.M. was done when the Association was first formed, and the grouping was in accordance with the classification of fine chemicals he had laid down in his paper of 1916. Most of the people in the fine-chemical group made a large range of articles; for instance, The British Drug Houses, Ltd., made over 2,000 chemicals. The directory published by the Association in 1919 was got out for selling purposes in the export trade, and it merely gave a list of manufacturers, classified with the products they made, so that when a foreign buyer wanted a particular article he looked up the directory under that heading and saw which firms to apply to. It was left to the individual firms to have their names placed under any particular heading or headings they chose, and that accounted for the fact that some manufacturers were under a particular substance, such as the Phoenix Chemical Co. under cream of tartar, but they were not under the general heading of fine chemicals. The classification in that directory was not done editorially. With regard to the process described by the French witnesses, Mr. Hill said he should not regard that as a commercially practicable one, because he would anticipate a very variable yield from it, as his experience had shown that stage by stage chemical supervision is essential to getting a consistently good yield. Calcium tartrate and calcium sulphate had to be dealt with, and iron was an impurity which could only be eliminated by careful control. On the point of the chemical supervision required in soapmaking, Mr. Hill pointed out that Crosfield's actually made synthetic perfumes from certain products in the manufacture of soap, so that they were also fine-chemical manufacturers. In answer to the Referee, Mr. Hill said he went to see Kemball, Bishop & Co.'s works to satisfy himself that he was right in classifying these three substances as fine chemicals. He had been taken round and had listened to what he was told, but did not take any notes, nor did he think he was justified in asking for details of the process of manufacture. The Referee asked whether, in regard to the definition of fine chemicals which had been given by Mr. Hill, the purpose for which they were used came into consideration. Mr. Hill said that sometimes it had to be taken into consideration when the other tests were not sufficient to enable an opinion to be formed. The Referee: Supposing you had a chemical which complied with all the other tests laid down, how would the purpose affect the result?—If it complied with all the tests he would not inquire as to the purpose for which it was to be used, but if it were on the border line, then the purpose might be the deciding factor. The Referee asked whether, if the main use was industrial and a small use pharmaceutical, the whole thing would be classified as pharmaceutical. Mr. Hill said that citric acid, for instance, was used for a good many pharmaceutical purposes. The Referee then pointed out that the Phoenix Co. are in Group 2 (heavy chemicals) as well as Group 6 (fine chemicals) in the Association of British Chemical Manufacturers' classification of members, and yet they only made these three substances.

## STAGE CONTROL NECESSARY

Answering further questions, Mr. Hill said that stage by stage control was just as necessary in the manufacture of some heavy chemicals as in the manufacture of fine chemicals, but generally speaking the processes in the manufacture of heavy chemicals were much more standardised, and there need only be one broad general chemical control. They would not need analysis at every stage to the same extent as with fine chemicals. For instance, each succeeding batch of cream of tartar would vary in quality, because the raw material varied, and the mother liquor had to be tested frequently. The Referee: But the mere fact that you have analysis at various points does not constitute the skilled supervision that you have spoken of? Mr. Hill: It does not constitute the whole of it. The Referee: Then you agree you could not say that it is a fine chemical from the point of view of skill required unless there is something more



than analysis? Mr. Hill said that was so. He meant that it required chemists supervising the operations apart from analysis. Sir Duncan Kerly mentioned that the Phenix Co. made sulphate of potash as a by-product, and that accounted for them being in the heavy chemical group. This was sold as a fertiliser. The Referee said they seemed to have solved the question to a fine point as regards manufacture. It was conceded by the witness for the opposition that it was not sufficient to have chemical supervision only by way of analysis, and he supposed there would be evidence as to supervision at the various stages. Sir Duncan Kerly said he had worked out in great detail the stages of his processes. His two clients did not use the same process in every particular, but he had put down, for the benefit of the Referee, the points that were common to both. He was willing that Sir Arthur Colefax and Mr. Parry should see that, but he did not wish it published.

#### MR. J. SWINBURNE'S EVIDENCE

Mr. James Swinburne, F.R.S., said that although before this case came on he had always had a vague idea of what a fine chemical was, he had never seriously thought about it. Before the Act was passed he had regarded a fine chemical as one which was made with considerable difficulty, involving a great deal of skilled supervision, was generally pure, and made in comparatively small quantities.

The Referee asked if the purpose for which it was used was taken into consideration.

Mr. Swinburne said it was, and he should have added that the purpose for which it was used was one requiring great purity. He had been over two works of Kemball, Bishop & Co., but before that he was familiar with the manner in which these substances were made. The processes he had seen at both works were certainly, in his opinion, fine-chemical processes. They were fairly elaborate processes, and certainly were chemical processes involving a great deal of skilled supervision throughout. In one factory there was a special laboratory in the works itself in order that close supervision might be given to the various processes. Sir Arthur Colefax said it might be that after he had seen what Sir Duncan Kerly had promised with regard to the details of the process, he might not desire to cross-examine Mr. Swinburne on this part of his evidence, and he suggested that he should postpone questions on Mr. Swinburne's evidence, and recall him if necessary. This course was agreed to.

Mr. Swinburne, continuing, said that one of the factories was making cream of tartar and the other tartaric acid and citric acid, and there were about twenty chemists at the two places, who, he understood, were not engaged on research work at all, but in carrying out the manufacture. He did not think it was possible to have a man or men in such works as these to carry out analyses and nothing else, and capable of doing nothing else. In all these cases they must employ real chemists, even though they did not use all their chemical knowledge. That was in the nature of an insurance; they must have a trained man, although a great deal of his training was never used, so that he could deal with emergencies when they arose. It was no doubt possible to train a man to do analysis and nothing else, but, generally speaking, they would not get a man who would be trained blindly in that way; he was bound to get to know a great deal more of the process and be useful in that way. The processes he had seen were carried out in small batches, and the plant was in small units, because it was more practicable to have the plant in small units.

In cross-examination, Mr. Swinburne explained that the vats were 4 ft., 5 ft., or 6 ft. in diameter, and it was impossible to trace one batch of material right through the works, because some of the liquor from a batch would, after reaching another vat, be returned to the first vat for treatment again. He agreed that in substance the process used by Kemball, Bishop & Co., was one of solution, crystallisation, and decolorisation, but there was also involved in the process the precipitation of calcium sulphate, which involved skilled supervision.

#### WHAT IS A CHEMIST?

The Referee asked a series of questions as to the type of chemist and what was meant by a chemist in this connection. Mr. Swinburne said that a head chemist in a works like this would have to be an exceedingly able all-round man. Witness believed that under an Act of Parliament a man could only call himself a chemist if he were a druggist, but generally a chemist was a man who went to a technical college, or places like South Kensington, and got a knowledge of chemistry. Very often he went to the Institute of Chemistry and passed an examination, and then called himself F.I.C. These young fellows would at first be set to do purely repetition work in the way of analyses, and then gradually worked up; but the work of almost everybody in an industrial business was, as a rule, much below his capacity, because he had to have the ability to deal with an emergency. In his opinion, a man was a chemist if he was earning his living by the exercise of chemical knowledge, even if he started as a bottle-washer. The Referee: But he would only do that one job, and you would not call him a skilled chemist in the ordinary way? Mr. Swinburne said he should think that every one of this class of chemist had had a chemical education before going into a works. It was quite possible that a man might go into a works as a boy and rise up, as years went on, through experience, as used to be the case so commonly in the old days, but it was not so likely now. The Referee: You would call him a chemist if he only had chemical knowledge for his particular job? Mr. Swinburne said that was so. The Referee: You say that in many cases a man might be using very little chemical knowledge, but he would be a chemist? Mr. Swinburne again replied in the affirmative.

#### EVIDENCE FROM CHESHIRE

Mr. J. R. Lankshear, at one time lecturer in chemistry at the Victoria University, and manager of a Government factory during the war, said he had had a long experience of chemical-manufacturing operations as a works manager, and he specially mentioned aniline, Glauber's salt, Epsom salts, salt cake, hydrochloric acid, sulphuric acid, nitric acid, synthetic phenol, T.N.T., nitro-benzol, and nitro-naphthalene. In 1917 he formed the firm of Lankshear, Wickstead & Co., Ltd., manufacturing chemists, Botany Mill, Woodley, near Stockport, Mr. Wickstead being late chief engineer to Kemball, Bishop & Co. At present the firm was manufacturing tartaric acid only. When he had first contemplated taking up this manufacture his state of mind, from a study of the text-books and other literature, was that it was an extremely simple process, but in practice he had by no means found it an easy substance to manufacture. The text-book information available did not enable him to solve the difficulties. There were no well-known English text-books on the subject, but such as did exist merely told him what he had already been taught, and he had to set to work to make his own experiments in the laboratory to get over the practical difficulties. His first difficulty was with the raw material, which generally contained a considerable quantity of albuminous material which was colloidal, and under the influence of heat this colloidal matter became very sticky and difficult to handle. The difficulties in the course of the process were innumerable. They were not insuperable, but they did require the most careful supervision and, not only careful supervision by a man who could do analyses, but by a man who had sufficient knowledge and sufficient honesty to take a decision when his analysis told him that things were not going as they should, before serious loss was incurred. The composition of the contents of vats varied considerably, because the contents of one vat could not be identified throughout the process; at some stage the contents of the first vat was returned, in part, to the original vat, and so the charges into the original vat became mixed. It was therefore the duty of the chemist to watch carefully the position continuously and to report at once or take the appropriate action to put things right. Therefore, analytical skill only was not sufficient to run a factory, because analytical skill played a comparatively small part in chemical industrial operations.



Comparing the manufacture of tartaric acid with that of other chemicals with which he was familiar, and after hearing the evidence in this case, witness said that if anything had been borne in upon his mind it was that every single chemical process had its own particular difficulties which must be met. In some instances, once the difficulties had been met the conditions could be arranged to prevent their recurrence, but the manufacture of tartaric acid was not susceptible to treatment in that way. The difficulties were always cropping up, and he was still troubled with them. During the war, in the manufacture of synthetic phenol it was found possible to standardise the processes so that the yields and quality were extraordinarily high for the purpose of picric-acid manufacture, but even there difficulties occurred in a most unexpected manner. On one occasion the results were not what they should have been, and he found it necessary to have chemists in the sulphonor house. At another time, there was trouble in the benzol distillery because they had not been kept well posted as to the crudity of the benzol when it came in, and a sufficiently careful check was not kept to see if they were getting paraffin in the benzol. In this class of manufacture the difficulties were greater with the chemical processes than with the plant, whereas in others, by designing the plant in a certain way, the difficulties could be avoided. In the case of tartaric-acid manufacture, the yield at every stage was of the utmost importance from the financial point of view. Indeed, there was joy in the camp if they were able to reduce working costs by only 1 per cent.

#### PROBLEMS OF MANUFACTURE

The British Pharmacopœia test was ridiculously stringent with regard to ash—viz., 0.1 per cent., but he was able to maintain that, although it was particularly difficult to eliminate the calcium sulphate. He agreed with Mr. Parry that it was a comparatively simple thing to separate calcium sulphate from the calcium tartrate, but their troubles were only beginning at that stage, although that would not be imagined from the evidence of Mr. Parry. The calcium-sulphate sludge which was formed was intensely difficult to filter, especially if it were produced from a low-grade raw material, largely due to the colloids and the physical condition of the precipitate, which consisted of very fine needles matted together, and it was not at all safe to assume that the greater proportion of the calcium sulphate had disappeared from the solution during the first stage, and, as evidence that calcium sulphate was carried through to further stages in the process, he produced some samples from the evaporators at Kembell, Bishop & Co.'s works, which he said contained 90 per cent. of calcium sulphate. Calcium sulphate would quite unexpectedly separate out at a later stage of the process in the form of a fine precipitate, and if it were not all removed in the early stages it was quite possible that the whole of the final product had to be sent back. Another difficulty was that the first stage of tartaric-acid manufacture consisted in the conversion of the raw material by adding an alkaline salt in the presence of water. There was only one point of temperature concentration at which the reaction could be called anything like complete. If the conditions shifted away from that point, there was a definite working loss. The question of temperature and the specific gravity of the contents of the tanks during the process was of the utmost importance, for the reason that tartaric acid was an unstable substance and slowly decomposed in the course of the process, particularly at high temperature. During the course of his preliminary experiments, he had tried the St. Thibery process, which was the one referred to as in operation at the Marseille factory of Mante & Co., by M. Gladysz. He had in his own works a large-scale research laboratory in which he was able to use charges of 1 cwt. at a time, and with this plant he had experienced great difficulty in obtaining a tartaric acid which would be of B.P. standard of purity and of marketable colour. Sometimes he got the one and sometimes the other, but seldom both. That was the process which had been referred to by the complainants as one of solution,

crystallisation, and decolorisation, but he himself preferred to call it the "hit and miss" process.

The Referee: Is that a simpler process than yours?

Mr. Lankshear said it was, and that economically the process was a fatal one if there was competition. Continuing, witness made further reference to the English text-books on tartaric-acid manufacture, and said that the book by Geoffrey Martin was the only authoritative one. There was a French text-book by Dr. Carles, and in that great stress was laid on the importance of control and methods of testing. In his own opinion, the analysis of the raw material as it came into the works was of great importance, both as a check on the supplier and a guide as to the quantity of reagents required to deal with the substance in the works, and it was not an easy matter. In his case he had every parcel of raw material checked, as he regarded it as imperative from the commercial point of view. He had also experimented with citric acid in the large-scale laboratory already mentioned, and he had found that that also required a great deal of skilled control. In his own works, where at present only tartaric acid was being made, there was a chemist on duty at all times during the twenty-four hours for 365 days in the year. The works were never left without a chemist in executive control, who could give definite instructions to the workmen. There was a chief chemist and five assistants, and forty-five people who had not had special chemical training. The chemical assistants were men of about twenty-five years of age, who had had chemical training and had passed through a period of trial in the works.

The Referee: Would you call them highly skilled chemists?

Mr. Lankshear said that raised a difficult question. As a university lecturer he had had to go into that question a good deal, and he had often found that a man who passed through his course at the university with honours was by no means so good as a man who was less brilliant when it came to works practice. In fact, it often paid them to pay the more brilliant man to keep away from the works. Answering further questions, witness said that one of the five assistants was on duty continuously, and sometimes more than one. At the present time the works could be run at night with one chemist, because the processes had been so arranged that the more important were carried out during the day when several were on duty. The Referee: Do you regard the chief chemist as essential? Mr. Lankshear said he did, for the purpose of general control. He handed the Referee particulars of the organisation in this respect.

#### MR. LANKSHEAR CROSS-EXAMINED

Sir Arthur Colefax then cross-examined. Witness said that his business was started as a limited company in 1917, and succeeded a partnership firm of the same name, which, however, did not do any manufacturing and was merely in existence while the necessary finance was being arranged for the limited company. At one time they made sulphate of potash as a by-product from the manufacture of cream of tartar, and sold it for fertilising purposes, but it was found that it did not pay, and the potash was now thrown away. That accounted for the fact that his firm was in Group 1 (heavy chemicals) of the Association of British Chemical Manufacturers. He had taken that matter up with the Association, and was now included in Group 6 (fine chemicals). He agreed that in 1919 his firm was not in Group 6. Sir Arthur: If you had been asked in 1916 whether tartaric-acid manufacture was an easy process, you would have said "Yes"? Witness agreed. Sir Arthur Colefax asked if witness would have had any doubt in his mind in 1916 that it was a fine chemical. Witness said he would not care to say now what he might have thought in 1916. He did not remember that he had ever recognised a distinction between fine and heavy chemicals in the way that was now being discussed, but, generally speaking, he believed he would have regarded it in 1916 as a fine chemical. The Referee said he could not see how, after what witness had said as to his thinking it was an easy process, he could then have thought it was a fine chemical. Witness said the present distinction



had been forced upon him by these proceedings, and he was not aware that he had set a boundary between the two. The Referee: It only existed in a vague way in your mind? Witness: Yes. Sir Arthur Colefax: But now you are quite convinced that tartaric acid is a fine chemical? Witness said he was, according to the definition he had given. The hearing was adjourned.

#### SATURDAY'S PROCEEDINGS

Mr. Lankshear was further cross-examined on Saturday. He said that he meant to imply in previous answers that in 1916 the distinction between fine and heavy chemicals was not regarded as of such importance as it is now; but it was his decided opinion to-day that all three substances concerned are fine chemicals, and he had arrived at that decision because of his experience in the manufacture of tartaric acid. Sir Arthur Colefax said he wanted to get at what it was that caused witness to change his mind between 1916 and now. Mr. Lankshear, who was also questioned by the Referee on this point, said the opinion he now held was that a fine chemical is a chemical substance produced in a high state of purity, the economical manufacture of which involves scientific control and supervision. In the main, that control must be continuous. Tartaric acid had always been thought of by him as connected with the other vegetable acids of a similar character in organic chemistry, such as malic acid, maleic acid, succinic acid, oleic acid, and fumaric acid. Sir Arthur Colefax said he would suggest that two of these, malic and fumaric acid, were not commercial articles at all. Mr. Lankshear replied that they were being intensely studied in America with a view to making tartaric acid from them. Sir Arthur Colefax: Oh! please confine yourself to my question. They are not commercial articles. The Referee: Is not there a broad distinction between those that are commercial articles and those that are not? Witness said he could not say. Further cross-examined: He did not pose as an expert in cream of tartar, but, in his opinion, cream of tartar of B.P. purity was a fine chemical. If, on the other hand, it was not of that purity and had been made by some such process as that mentioned by the French witnesses, then he should not class it as a fine chemical. Sir Arthur Colefax: Then cream of tartar as it comes on the London market is not necessarily a fine chemical?—Mr. Lankshear said he should have grave doubts about every individual parcel on that point. The Referee: You say that if it complies with the B.P. standard it can fairly be called a fine chemical?—Mr. Lankshear said that was so, but if it had a commercial use with something which did not comply with this test he did not know enough about it to say.

Sir Duncan Kerly, speaking with regard to the suggestion that all cream of tartar coming on to the London market had a purity of 99 to 100 per cent., said there might be some which had been diluted with something which did not matter. Therefore, as he believed had been admitted by the witnesses on the other side, cream of tartar might come in with, say, 98 per cent. purity, but it would still be B.P. purity in everything that mattered. If it was used for food purposes it had got to comply with the B.P. test under the Sale of Food and Drugs Act. Sir Arthur Colefax said he would agree as to the latter point, but he did not agree that there was a case of anything being added as a mere diluent. There was no suggestion that the cream of tartar of from 98 to 100 per cent. was such by reason of the addition of a diluent, and no such suggestion had been put, in cross-examination, to his witnesses. Sir Duncan Kerly said his view was that cream of tartar in this country for commercial purposes must be of B.P. purity, subject to the possible addition of a mere diluent. For most purposes it would require to be of B.P. standard.

Mr. Lankshear, as illustrating the need for care in analysing the raw material, said that he once had a parcel of cream of tartar which was lying at Liverpool, and it contained such a high percentage of arsenic that the public health authorities were very concerned at the cream of tartar being in this country at all. After he had bought it, a man was sent to his works from Liver-

pool to inspect it and to make sure that the material was actually put into a process and was not sent out again. Questioned as to the quality of raw material which he used, Mr. Lankshear said he used high grade when he could get it at the right price. The highest grade usually contained from 70 to 75 per cent. tartaric acid, and the lower or ordinary grade from 50 to 60 per cent., and he admitted that it was the latter which he mostly used. He also agreed that higher-grade argols are more difficult to use than the lower grade. Another point on which he agreed was that tartars and citrate of lime are bought on analysis, the test being by an independent analyst. Sir Arthur Colefax: What has been your average output of tartaric acid since you started? The Referee: The witness may object to stating that. Mr. Lankshear said he would rather not state the figures openly. (They were written on paper and handed to the Referee and seen by Sir Arthur Colefax.) The question of the classification of Lankshear, Wickstead & Co., Ltd., in the list of members of the Association of British Chemical Manufacturers, was again touched upon. Sir Arthur Colefax then called attention to the fact that the firm of T. & H. Smith, Ltd., which was in Group 6 (fine chemicals) did not, in their advertisement, mention any of the three substances concerned in this inquiry.

#### A PROCESS AND ITS SUPERVISION

Mr. Lankshear, questioned about his process, said it was the well-known Scheele-Lowitz process with Desfosses' modification. The argol was analysed when it came into the works, and it was carefully weighed and dried and the result taken to the laboratory. The Referee said it would take a long time if all the details of these processes were to be gone into in this way, and even if they were so described, he did not think he was capable of forming an opinion whether they required chemical supervision or not. He would take what the witnesses said on that point. Might he put it in this way to the witness. Supposing he had a skilled foreman in charge of the process and a wide supervision by a skilled chemist, would not that be sufficient to carry out the process efficiently? Mr. Lankshear said it would not, because he had tried it. The Referee said he had in mind that witness had told him that he only had one chemist continually on duty, at any rate for part of the time, and, indeed, he seemed to be trusting to one chemist always on duty. Did not that imply a wide supervision by that chemist? Mr. Lankshear said it did not, because many of the operations took sixteen, eighteen, or twenty-four hours to go right through. There were certain points in the operations which must be very carefully watched, and the chemist gave his instructions when those points were reached. He knew how long it took to reach them, and he was on the spot, took the test, and gave his instructions for the next stage. The Referee asked if that was not what was meant when they spoke of wide supervision, that the chemist was there when he was wanted. Mr. Lankshear said the chemist had more executive work to do than the mere expression "wide supervision" conveyed to his mind. He actually gave instructions when the successive stages of the process took place. The Referee said the inference he had drawn from the document which Mr. Lankshear had shown him of the organisation of his works was that great emphasis was laid on testing. Until this particular inquiry, the distinction had been either that they must have a chemist supervising and keeping his eye on things—and that was called wide supervision and was not inconsistent with the production of heavy chemicals—or there must be a chemist doing the work or watching it being done. He himself had got to settle which side of the fence the manufacture of these three substances came. Mr. Lankshear said that in his opinion they came in the second category, because the chemist would perform some of the operations himself personally. At the same time, it was not safe to say that that was peculiar to fine or heavy chemical manufacture. It all depended on the size of the charges and the nature of the particular operation. The Referee: Do you really affirm that the manufacture of these three substances



would not be carried on with a skilled chemist giving a broad supervision, apart from analysis, and that it really needs this expert supervision in the various stages of the process? Mr. Lankshear: I can affirm that from my own experience. Answering Sir Arthur Colefax, witness said he should call the batches he works with—35 to 40 cwt.—medium-sized batches, not small batches. The size of the tanks varied considerably. The maximum would hold 1,500 to 2,000 gallons of water, and the minimum would be about 4 ft. by 3 ft. by 3 ft. in size. They were wooden tanks, lined with lead, which were used in the early part of the process. There were also certain bronze pipes and valves, but he had not known them to introduce copper. He had tried the St. Thibery process in the laboratory for making cream of tartar on a semi-commercial scale, with a view to translating it into a commercial process, but had not followed it up.

Re-examining, Sir Duncan Kerly put in the correspondence between witness's company and the Association of British Chemical Manufacturers, in which it was stated that the company regarded themselves as fine-chemical manufacturers, and their request to be put in Group 6 was acceded to. The Referee said that these were commercial articles, and were prepared on a large scale compared with the bulk of fine chemicals. Mr. Lankshear said that the scale was comparatively small compared with admittedly heavy chemicals, and comparatively large compared with admittedly fine chemicals. At the same time, he admitted he did not know of any agreed fine chemical which was prepared on the same scale as cream of tartar, tartaric acid, and citric acid. Sir Duncan Kerly suggested that sulphate of quinine, indigo, aniline, and salicylic acid were fine chemicals which were prepared on a comparable scale with cream of tartar. Sir Arthur Colefax said that natural indigo was obviously not a fine chemical; and was it suggested that artificial indigo was? Sir Duncan Kerly replied that he should have thought so. Sir Arthur Colefax: I do not know where we shall get to soon. There will be nothing that is not a fine chemical, except, perhaps, hydrochloric acid, sulphuric acid, and soda ash. That is the sort of definition we shall come to. Sir Duncan Kerly: I think it is very likely I shall call common salt a fine chemical.

#### HOW CREAM OF TARTAR IS MADE

Mr. A. M. Peake said that in 1902, after being with Ogston & Moore, analytical chemists, for a short period, he went to the Mante works at Marseille as chief laboratory and control chemist, and remained there for over two years. At that time all three substances were made, and he was in charge under M. Gladysz's father, who was a skilled chemist, but difficulties in manufacture were brought to him in the laboratory to be solved. While he was with the firm he became acquainted with the general methods of manufacture of the cream of tartar and citric acid in the small works at Marseille where he worked. At that time the larger works at Agde did not belong to the firm. The raw material used for cream of tartar was wine lees and argol to a small extent. The raw material was very carefully selected and analysed for sulphates, its filtering properties, and the impurities. Filtration was one of the most important parts of the determinations that were made. When the tests had been made, some of the raw material was used for cream of tartar manufacture and some for tartaric acid manufacture, according to its nature.

The Referee suggested that it should be carefully thought over as to how far this witness sought to disclose processes which he learned in the works, which the firm might not wish disclosed now. Witness said that the process he was going to describe was patented in 1899 by M. Gladysz, and he imagined that it was common knowledge now. The actual process was not quite the same as the patented one, but was a modification of it. Sir Arthur Colefax said it might not be the case that M. Gladysz wished it to be known what process was being used. Sir Duncan Kerly suggested that what was in the patent must be common knowledge, although any variation of it might well be confidential. He did not wish to have anything disclosed which was regarded as secret.

Mr. Peake, continuing, said there was no roasting of the raw material in the first place. After grinding it was put into vats with a considerable excess of hydrochloric acid for several hours, and the result was to bring up the tartrate of potash into solution in the form of tartaric acid mixed with potassium chloride and a small quantity of calcium chloride. The material was then pressed and filtered. The filtrate was a highly coloured solution. It was then treated for the removal of lead, arsenic, and sulphates. This latter was a chemical process, and there were chemical means for getting out these substances. The filtrate was also treated with a view to decolorisation. Then the liquid was clear and in a very acid state, and it was necessary to neutralise the solution with milk of lime, while sodium bisulphide was added, but not in very large quantities. This neutralisation was not a matter which could be carried out by a foreman; undoubtedly it needed a skilled man to do it. The man who was doing it in the works when he was there had great chemical knowledge, although in this country we might not call him a chemist. In witness's opinion it was indispensable to have a skilled man to carry out the neutralisation process, and there was such a man in the works. If there were not a skilled man there might be all sorts of difficulties arising, such as insufficient lime, which would leave a good deal of cream in solution, or too much lime, in which case the cream of tartar would be of bad quality. The precipitate was washed and dried and ground, and put on the market. The liquor was precipitated as tartrate of lime for tartaric acid. There was a critical point: it was necessary to add just the right amount of lime to get down the cream of tartar, and it was possible by this process to get 99 per cent. purity if the thing was got right in solution. The impurity at this stage was calcium tartrate, of which there was always a small amount present, and there was always also a small amount of insoluble matter. The metallic impurities had been got rid of at an early stage in the process. He was also acquainted with the St. Thibery process, the essence of which was extraction with hot water. Here, again, the argol was ground and not roasted. The first step was to put the raw materials in boiling water. After boiling for some time it settled, the clear liquor was siphoned off into crystallising vessels and the solid residue was generally abandoned. It contained very little tartaric acid. The calcium tartrate was mostly in the form of red crystals of impure cream of tartar of 90 to 92 per cent. These were redissolved in boiling water, iron was removed, and the tartrate was converted into bitartrate. After they had redissolved the liquor was treated with animal charcoal, ferrocyanide, or kaolin, and sufficient calcium chloride. They again recrystallised, and obtained cream of tartar, but by this process they did not always obtain 99 per cent. purity. It depended partially on the care taken to remove calcium tartrate, and it also depended on the process itself, which was an erratic one. He did not believe with this process that it was possible to get continuously 99 per cent. purity. The principal impurity was calcium tartrate and sometimes calcium sulphate, and as the mother liquor had to be used over again it was important to get rid of as many of the impurities as possible, otherwise the mother liquor soon became unusable. He should certainly say that a chemist was necessary with the St. Thibery process, and he should always be on the spot. He had been acquainted with the working of the process in another works in France. At the Mante works the first process he had described was used. In connection with that process at the Mante works there were three chemists when he was there and two men who, according to English standards, might be called chemists, but who were not regarded as such in France because they had not obtained a diploma. At present, Mr. Peake said, he was with the Phoenix Chemical Co., and was familiar with the processes they adopted for the manufacture of tartaric acid and citric acid. While he was in the Mante laboratory he did some research work under the direction of M. Gladysz, sen., and also analyses of the raw materials and sometimes of the liquids of the factory.

The Referee asked if any analysing was done as a matter of routine at different stages of the process.



Mr. Peake said there were no such regular analyses taken. As a rule, the analyses of the liquids of the factory were done by boys, but he always analysed old liquors. That was done as a matter of course in the case of the old liquor, which was the liquor used over and over again, once a week or fortnight. If there was any trouble he did it more often. That was work which could not be entrusted to boys, because it was necessary to know the quality of the old liquor as it was going back into the process.

Sir Duncan Kerly asked if, by the St. Thibery process, it was possible to get continuously a product of B.P. purity. Witness said from his experience he was convinced that it was not. It was possible to do it occasionally, and it was largely a matter of luck as to what result was obtained. As a matter of fact, he should say that the St. Thibery process had died out completely. Answering further questions, witness said that the process for the manufacture of tartaric acid and citric acid adopted by the Phoenix Co. did not differ a great deal from the process used at the Mante works, except in the initial stages, but his opinion was that it would be impossible to carry out the process at the Mante works without skilled chemical supervision. He left Mante & Co. in 1906 and went to South America and installed a cream of tartar factory, and returned to Messrs. Mante in 1908 for a time and did some research work. In 1909 he went back to Ogston & Moore, and had experience of the manner in which tartaric acid was made in Italy. He frequently had to handle samples of all three substances from Italy during the war when the Italians were short of chemists, and he was able to judge from these liquors how the substances were made. As a result of that he had come to the conclusion that the processes used in Italy involved skilled chemical supervision, and all the Italian factories that he knew did employ chemists.

#### MR. PEAKE CROSS-EXAMINED

In answer to Sir Arthur Colefax, in cross-examination, Mr. Peake would not agree that it is perfectly possible with the St. Thibery process to obtain B.P. purity continuously. Asked as to what the skilled chemist which witness had said was necessary for the St. Thibery process would have to do, Mr. Peake said he would have to analyse the raw material, also the red crystals, and see the amount of lime and iron and other impurities. He would also have to look after the mother liquors, and see at what point they must be rejected and how far they could be used for dissolving further charges. Sir Arthur Colefax said it came to this, that in order to avoid every possible loss it was necessary to make analyses to see that they did not pass into the drains something which ought to be used. Mr. Peake said it was not quite that. The chemist had to decide, for instance, when the mother liquor was contaminated, and it was a matter of knowledge and experience of manufacture, as well as analysis, to determine that. There were some things which could not be determined by analysis only. It was a question of analysis and scientific knowledge of chemistry. It might be that in some works the process was carried on without chemical supervision of the kind he had suggested, but he should not regard that as practicable. The chemist who was in charge of the tartaric-acid factory of Messrs. Mante was a doctor of chemistry in Lausanne University. The man who was in charge of the citric-acid plant had been at the works for many years, originally in the laboratory, and it was the custom when he was at the Mante factory for the men who were made foremen to have been through the laboratory.

In re-examination, witness said that the Mante works did not use the St. Thibery process, but a more complicated process, and it was this process which had been the more successful of the two in his experience. When he went to South America he had a free hand to adopt which process he pleased, but he found the St. Thibery process was not successful, and gave it up.

At this point Sir Duncan Kerly said he wished to put in details of the actual processes adopted by his clients, and for that purpose he wished the room to be

cleared. There was an adjournment for an hour for this purpose, the only people present during this part of the proceedings being the Referee, counsel on both sides, representatives of the opponents, and Mr. Parry, for the complainants, whom Sir Duncan Kerly said he would have no objection to being present.

#### A FINE CHEMICAL DEFINED

Mr. H. Ballantyne gave the following definition of a fine chemical: "A fine chemical is a refined chemical of purity such as one associates with a pharmaceutical chemical which is normally manufactured in relatively small batches under highly skilled supervision and skilled labour, the manufacture being constantly controlled and conducted by such supervision and labour, and the cost of such supervision and labour being high in proportion to that of the unskilled labour involved." He said there is no scientific definition of the term "fine chemical," and he had prepared this one as representing his own view. He should not call it so much a commercial term as an industrial term, and he thought the term had the meaning he had given above, among industrial chemists. It was difficult to place a dividing-line between heavy and fine chemicals.

The Referee: Then a fine chemical is not one which is not heavy? Mr. Ballantyne said that was not necessarily the case. The Referee: There is to be an intermediate zone?—Yes.

Sir Duncan Kerly then asked witness to deal with the fineness of heavy chemicals and the heaviness of fine chemicals. Mr. Ballantyne said that in some cases there were heavy chemicals which were of a very high degree of purity, and they could not be called fine chemicals. In some of these cases manufacture proceeded with little attention in such a way as to give a very pure product. In the manufacture of ether, for instance, it was merely necessary to turn on a tap. The plant was beautifully designed for the purpose, and a pure product was produced in large quantities, but he would not call it a fine chemical. The skill had been applied to the plant, and it was not required also in the operations. In regard to the heaviness of fine chemicals, he had never attached importance to the total quantity of the chemical produced. He was not prepared to put the expression "comparatively small batches" into definite figures. In some cases they multiplied the operations, and so got a big output. One of his chief reasons for the definition he had put forward was usage. Special reference was made to the fact that the Society of Chemical Industry, in its Journal, had for twenty-five years adopted the heading "Fine chemicals, alkaloids, essential oils, and extracts," and that the three substances in question were placed under this heading. Mr. Ballantyne said he had nineteen references to that Journal in which these substances were referred to as fine chemicals. Another reason was the quality of the product, purity, and process of manufacture. The fact that cream of tartar might be made by the St. Thibery process on a commercial scale did not alter his view that skilled chemical supervision was necessary. Mr. Ballantyne said he had been over Kembell, Bishop & Co.'s works and inspected the processes there. He had also been over the works a good many years ago, before they passed into the hands of the present firm, and the plant now was practically the same as it was then. He had no doubt in his own mind that the process is one involving skilled chemical supervision, from what he had seen. There were eight chemists in the cream of tartar works. The cream of tartar was produced there in small batches within the meaning of his definition. M. Gladysz did not describe his process in detail, but what he did say was significant. It was stated that there were fifty workmen employed by the Mante factory, and the output per man worked out to 2½ cwt. per man per day at the large factory, which was a very small output for each individual worker, and from that he gathered that the work was subdivided so as to be under continuous control and each workman produced a small quantity. That was in the factory where the secret process was employed. As to the skill of the boys, which had been referred to, Mr. Ballantyne mentioned that when he was



seventeen years of age he was chief chemist to a large sugar refinery, and he had one assistant fourteen years old. The manager was a chemist, and lads of fourteen or sixteen, if trained in their particular job, could make the tests quite efficiently, provided there was a chemist at the top to whom they took their results.

The Referee asked if that was the sort of chemist referred to in witness's definition.

Mr. Ballantyne said it was, *plus* the chemist at the top. That, however, only applied to M. Gladysz' process, and not to Kemball, Bishop & Co.'s process. His object was to suggest that even the Gladysz process was carried out with a considerable degree of chemical supervision. He himself was a manufacturing chemist, being connected with a few companies, and he knew the method adopted. The young men became the eyes of the older men, and he had seen skilled foremen doing that sort of thing.

#### MR. BALLANTYNE CROSS-EXAMINED

In his cross-examination, Sir Arthur Colefax drew attention to the fact that although up to 1909 the heading of "Fine chemicals, etc.," was maintained in the Society of Chemical Industry's "Journal," since then there was a heading, "Acids, alkalis, salts, non-metallic elements," and all three substances came under that heading and not under the heading of "fine chemicals." He pointed to many volumes in support of this. He also said that in the references he had handed in to the Referee, one or more of these substances was referred to under the heading of "heavy chemicals."

Mr. Ballantyne, answering further questions, said that 94 per cent. of the tartaric acid was recovered from the argol used by Kemball, Bishop & Co. as cream of tartar. He believed that the process adopted by M. Gladysz was really carried out under highly skilled supervision. The same remark applied to M. Bonnal's process. M. Bonnal had long experience, and was a specialist, and there was a higher degree of skill applied in both cases than might be apparent from the evidence.

The Referee: Does that sort of knowledge fulfil what you mean by highly skilled supervision? Mr. Ballantyne said it did. The Referee: Then your definition of the skill required does not quite cover the ground?—Mr. Ballantyne: Not altogether; no definition can. The Referee: You do not suggest that every pharmaceutical chemical is a fine chemical, do you? Mr. Ballantyne said there were a number of doubtful cases. Supposing bicarbonate of soda was made as a heavy chemical but certain lots were found to be fine enough for use as a pharmaceutical chemical, he should call those lots fine chemicals. Broadly, he defined pharmaceutical chemicals as fine chemicals. Photographic chemicals were fine, with one or two exceptions, especially hyposulphite of soda. Technical chemicals meant chemicals for technical and industrial purposes, but he should not say that anything like 25 per cent. of chemicals were heavy, as had been suggested.

The Referee said it was only lately that the scientific men had applied their minds to what these words meant: viz. heavy or fine chemicals. These terms, however, had been commercial terms among merchants. Might it not be that if Mr. Ballantyne applied his tests to the whole list of chemicals he would say that there were inconsistencies, and that certain chemicals had been called heavy which would now be fine, and *vice versa*. Mr. Ballantyne agreed. The Referee asked what view Mr. Ballantyne would take in the case of a chemical which had formerly been called by the industry heavy, and he came along with his tests and said it ought to be called fine. Mr. Ballantyne said that if the chemical industry had called it a fine chemical, then it ought to be called a fine chemical. The Referee said that, supposing cream of tartar had been called a heavy chemical by the trade for thirty, forty, or fifty years, and one was satisfied on the definitions now put forward that that was a complete misnomer, what was he (the Referee) to call it? Mr. Ballantyne said that both might be correct. The Referee: But both cannot be correct for my purpose. I have got to come down on one side of the fence. Mr. Ballantyne repeated that a substance might be a fine chemical and a

heavy chemical as well. The Referee said that, on reading the evidence again, it might be that he would be satisfied that up till lately these substances had been regarded as heavy chemicals, and equally he might be satisfied that the methods of production really made them fine chemicals. What was he to call them in these circumstances? Mr. Ballantyne said they should be called fine chemicals, because that was not inconsistent with their being called heavy chemicals as well. It was not a case of dividing chemicals into groups. They might overlap. The Referee: That is a third view. I have been told by some people that there are only two—heavy and fine chemicals—and that the one is the antithesis of the other; then I am told that there is an intermediate zone; and now I am told they might overlap.—Yes. The Referee: And for ten days we have been treating them as an antithesis.

Sir Arthur Colefax said that the Board of Trade put forward the view that they were in antithesis in the *santonin* case. Mr. Ballantyne said he did not agree that the general body of chemists would say they were in antithesis. Sir Arthur Colefax said that this had simply been created in view of the Act. The old trade terms were quite distinct. Mr. Ballantyne said he had endeavoured to draw up a definition, because he foresaw that unless some definition was agreed upon each of these cases would have to be decided by itself. Sir Arthur Colefax said he had Kelly's Directory of the Chemical Industries for 1921, and he did not find the Phoenix Chemical Co. under the heading of fine chemicals. They were under "chemical manufacturers," but not under "fine-chemical manufacturers." Messrs. Lankshear, Wickstead & Co. were under "fine-chemical manufacturers." The Phoenix Co. were under "acids," and also under "alkali and alkali salts." Kemball, Bishop & Co. also were put down as citric and tartaric acid manufacturers, and also under "alkali and alkali salts," but not under "fine chemicals." Moreover, it should be remembered that a firm stated which headings it desired to be put under in a directory.

#### A BRITISH MAKER'S EVIDENCE

Mr. J. E. Whitehall, one of the three managing directors of Kemball, Bishop & Co., Ltd., said that his company also controlled John Bennet Lawes & Co., Ltd. In the two businesses there were 412 employees, which was considerably less than the number in 1920, owing to the trade depression. The whole reduction, however, had been in the unskilled staff and not the skilled staff. Asked as to the proportions in which tartaric acid was sold, he said that 61 per cent. went to wholesale druggists and saline manufacturers, 22 per cent. to baking-powder manufacturers, 4 per cent. to confectioners, 2 per cent. for export, and the remainder to various customers. These would be the usual sort of proportions, and thus it would be seen that 75 per cent. did not go to the textile trade, as had been mentioned. His firm, at any rate, did very little trade with the textile industry. Speaking with regard to the technical staff, witness said there were ten professional chemists and five apprentices included in the 412 employees, and in 1920 the salaries of the fifteen chemists amounted to £6,604. The two chief chemists received £1,500 each per annum. There were also sixteen men specially skilled in the process, and their salaries for 1920 were £6,200. These men had been with the firm anything from ten to thirty years, and got £8 per week. The percentage of the salaries of the skilled workers to that of the process workers was 45 per cent., taking these three substances in question. Prior to the war, cream of tartar almost entirely came from abroad, but his firm made experiments, and in 1915 began manufacture, and he supposed they had made some improvements, and now obtained as high a percentage of potassium hydrogen tartrate as possible. They began making tartaric acid in 1870, and the British factories were now, in his opinion, able to supply all the demands in this country for all three articles.

Mr. Swan cross-examined on behalf of the complainants. Witness entirely disagreed with the suggestion that of the proportion of tartaric acid that went to



wholesale druggists, only a small proportion was used for medicinal purposes. It was used very considerably in the saline business.

The Referee asked if witness had found himself handicapped in the cost of production. Mr. Whitehall said he had, very much. Before the war his was the only firm of tartaric-acid makers in England. At the present time competition was very keen, and there were factories in France, Germany, and Italy which sent the acid here. Four of his chemists did actual process work and not analyses.

#### DR. ORMANDY GIVES EVIDENCE

Dr. W. R. Ormandy, in defining a "fine chemical," said there was no single definition that would meet the case. Fine chemicals were not to be put into a compartment by themselves, and in his opinion it was necessary to take into consideration the following points: (1) The method of making, i.e. the skill required for control; (2) the size of the batches; (3) the nature of the plant, whether of a general character or specialised; (4) the value of the product and the ratio of the skilled to the unskilled wages involved; (5) the use of the term, whether limited or general; and (6) purity. The use of the product was a leading characteristic but not an important one. He was a director of the Electro-Osmosa Co., which specialised in the treatment of colloidal bodies, and in consequence he had addressed to him a great many inquiries as to the difficulties brought about by the presence of colloidal bodies. In the preparation of cream of tartar he should say that it was highly probable that there were special difficulties in dealing with the argol because of the colloidal impurities present. He admitted that he had no personal experience, but he was so convinced of what he had said that if he were asked to test a sample of argol and give an opinion as to its value for cream of tartar manufacture, he would suggest that it be sent to a firm who specialised; because he did not feel that he could give a sound opinion.

Cross-examined by Mr. Swan, witness said that prior to the passing of the Act the definition of a fine or heavy chemical never occurred to him. In the case of well-recognised heavy chemicals he would not take them out of the class of heavy chemicals even if they fell within the definition he had mentioned, but he could not conceive of a definition of a heavy chemical in the trade which was so clear that there was not a considerable number of bodies on the border line, just as there was in regard to organic and inorganic chemicals. He admitted that he did not know of a case of a chemical which, by trade usage, was regarded as both heavy and fine.

In reply to the Referee, Dr. Ormandy said he considered they were trying to define something which was indefinable. The Referee: You are trying to create a new definition and a new distinction? Dr. Ormandy said he was trying to make a rule which would be as compact as possible and include the bulk of the chemicals. He had tried very hard to get a definition which would make a clear line of division between heavy and fine and he had failed, as everybody else had who had tried. The Referee: If it is not consistent with the actual classification or trade usage, then your tests are not right. You scientists have never classified it, and now you come along and try to find a basis for the classification which exists, which is trade usage, and you probably find a good deal of inconsistency. There is no very clear basis, and you are trying to invent one; then, as soon as you have got one you find there is something which is inconsistent with it. Instead of saying that that showed the definition or tests were not right, you say that it shows it is not a heavy chemical. Dr. Ormandy said that view was only applicable to things on the border line. Carbonate of soda filled many of the tests he had laid down, and it was purer than many fine chemicals, but he would still say it was a heavy chemical, because it was made in the type of plant which was most specialised in the whole world of chemical industry. It was made in large quantities by a continuous process with specialised plant, and it was one of the branches of chemical manufacture in which the chemical

engineer had more to do with the production, almost, than the chemist. The plant which Kemball, Bishop & Co. had was a general plant, and if the works went bankrupt to-morrow the whole plant could be bought by another firm and used for other things. A typical heavy chemical plant was of very little value for other purposes. They had only to look at the works of the United Alkali Co. at St. Helens to appreciate that.

Mr. Swan suggested that colloidal difficulties were really mechanical difficulties. Dr. Ormandy said they were mechanical difficulties brought about by the physical-chemical properties of the colloidal bodies. Mr. Swan: They never heard of a colloid fifty years ago.—Dr. Ormandy: No, but they may have had trouble with them.

Re-examined, Dr. Ormandy said that if we desired to encourage a fine-chemical industry in this country it was necessary to have plant of a general character, with innumerable stills and autoclaves, which could quickly be transferred to other uses. It was the possession of this type of plant by the Germans which enabled them to make poison gases in quantity by utilising fine-chemical plant which was intended entirely for other purposes.

The inquiry was adjourned until Saturday, February 25.

## Coming Events

This section of the "C. & D." is reserved for advance notices of meetings or other events. These should be received by Wednesday of the week before the meetings, etc., occur.

### Wednesday, March 1

- Birmingham Pharmaceutical Association*, Imperial Hotel, at 8.40 p.m. Formation and Rules, R.P.U., Birmingham Branch.
- Liverpool Chemists' Association*, Britannia Rooms, Cunard Building, at 6.45 p.m. Whist-drive and dance. Tickets (5s. 6d. each, including refreshments) from Mr. J. L. Hirst.
- London Chemists' Golfing Society*, 17 Bloomsbury Square, W.C., at 8 p.m. Annual meeting.
- National Association of Women Pharmacists (London Group)*, "Plane Tree," 106 Great Russell Street, W.C., at 7.30 p.m. Tickets (6s. each) from Mrs. J. K. Irvine, Hon. Secretary, 25 Cedars Road, Clapham, S.W. 4.
- Pharmaceutical Society of Great Britain*, 16 Bloomsbury Square, London, W.C., at 11 a.m. Council meeting.
- Royal Society of Arts*, John Street, Adelphi, W.C., at 8 p.m. Cantor Lecture I, Professor Alan F. C. Pollard on "The Mechanical Design of Scientific Instruments."

### Thursday, March 2

- Fulham and Hammersmith Districts (Western Pharmacists' Association)*, Clarendon Restaurant, Hammersmith Broadway, London, W. Annual dinner. Tickets 8s. 6d. each.
- Chemical Society*, Burlington House, Piccadilly, London, W., at 8 p.m. Meeting.

### Friday, March 3

- Royal Institution of Great Britain*, Albemarle Street, Piccadilly, London, W., at 9 p.m. Mr. C. Morley Wenyon, C.M.G., on "Microscopic Parasites and Their Carriers."

### Saturday, March 4

- Royal Institution of Great Britain*, Albemarle Street, Piccadilly, London, W., at 3 p.m. Sir Ernest Rutherford, F.R.S., on "Radioactivity." Lecture I.

**EXTENSION OF PREMISES.**—Bath College of Pharmacy has recently been extended by acquiring and converting an adjoining house, in which Mr. D. J. Williams (the principal) has installed botany and physics laboratories.

**THE TITLE "CHEMIST."**—The Institute of Chemistry Journal, Part I., just issued, contains a long article on the title "Chemist." It is apparent that the Institute has realised that chemists and druggists cannot be bluffed out of their historic title.

**ENTHUSIASM.**—"On Tuesday morning, at a quarter to five o'clock, the Early Closing Association held a public meeting at the Freemason's Tavern for the promotion of earlier closing among the chemists and druggists. Notwithstanding the unusual hour at which the meeting was called (in consequence of the young men being unable to attend an evening meeting), a spacious room was well filled. . . . Several resolutions . . . were unanimously carried; one of which was to the effect that employers should be solicited to close at eight o'clock. . . ."—*"Annals of Pharmacy and Practical Chemistry,"* August 1854.



## The New Spanish Customs Tariff

BELOW we give a translation of the new Spanish Customs Tariff so far as it applies to products of interest to the drug-trade. This is the first occasion in Spain where there has been any attempt to classify chemical products,

and the tariff shows considerable evidence of the pressure that was brought to bear by the chemical manufacturers on the framers of the regulations. The tariff came into force on February 16.

No.	Article	Duties (pesetas)		No.	Article	Duties (pesetas)			
		First Tariff	Second Tariff			First Tariff	Second Tariff		
59	Glass containers, white or coloured, ordinary ... ..	100 kilos.	75.00	30.00	911	Acid, lactic, pure and lactates, net weight ... ..	100 kilos.	200.00	100.00
60	Glass containers, ground ... ..	100 "	150.00	60.00	912	Acid, sulpholeic, ricinoleic and other fat acids, gross weight ... ..	100 "	80.00	40.00
61	Earthenware pots ... ..	100 "	150.00	50.00	913	Tartaric acids, gross weight ... ..	100 "	300.00	80.00
62	Tin containers ... ..	100 "	400.00	160.00	914	Tartrates, crude tartrate of lime and argol, gross weight ... ..	100 "	20.00	10.00
63	Essential oils employed in perfumery ... ..	per kilo.	12.00	4.00	915	Cream of tartar and other purified tartrates, gross weight ... ..	100 "	200.00	50.00
64	Essential oils with alcohol ... ..	"	24.00	6.00	916	Potash carbonates, gross weight ... ..	100 "	88.00	22.00
65	Essential oils, with alcohol, for other purposes, not specified ... ..	"	24.00	6.00	917	Soda carbonate and other carbonates not under other headings, gross weight ... ..	100 "	75.00	15.00
66	Essential oils, without alcohol ... ..	"	14.00	3.50	918	Acid, oxalic and coml. oxalates, gross weight ... ..	100 "	70.00	35.00
67	Essential oils of badiane, citronella, clove, lemongrass, palmarosa, etc. ... ..	"	1.00	0.25	919	Acid, formic, gross weight ... ..	100 "	120.00	60.00
68	Unperfumed preparations, not specified ... ..	"	20.00	10.00	920	Formates, coml., gross weight ... ..	100 "	50.00	25.00
69	Iodine resublimed ... ..	"	4.00	2.00	921	Ammonia, coml., gross weight ... ..	100 "	20.00	10.00
70	Bromides (except those of precious metals) ... ..	"	1.50	0.60	922	Ammonia, pure, gross weight ... ..	100 "	50.00	25.00
71	Iodides (do. do.) ... ..	"	3.75	1.50	923	Calcium carbide, gross weight ... ..	100 "	150.00	30.00
72	Sulphur, refined and flowers ... ..	100 kilos.	18.00	6.00	924	Sodium chloride, gross weight ... ..	100 "	15.00	5.00
73	Salts of selenium, tellurium and cerium ... ..	per kilo.	10.00	4.00	925	Calcium and barium chlorides, gross weight ... ..	100 "	20.00	10.00
74	Salts of arsenic, save those under 884 ... ..	100 kilos.	80.00	30.00	926	Calcium and alkaline hypochlorites, gross weight ... ..	100 "	21.00	7.00
75	Alkaline, borates ... ..	100 "	25.00	10.00	927	Potassium chlorate, gross weight ... ..	100 "	180.00	35.00
76	Alkaline, perborates ... ..	100 "	170.00	85.00	928	Sodium chlorate, gross weight ... ..	100 "	180.00	30.00
77	Alkaline, silicates, solids ... ..	100 "	50.00	25.00	929	Potassium permanganate, gross weight ... ..	100 "	110.00	55.00
78	Alkaline, silicates, liquids ... ..	100 "	25.00	10.00	930	Chromates and bichromates, coml., gross weight ... ..	100 "	40.00	20.00
79	Caustic soda, do. potash ... ..	100 "	18.00	6.00	931	Chloroform, chloral hydrate and methyl chloride, net weight ... ..	per kilo.	10.00	2.00
80	Magnesium oxide ... ..	100 "	100.00	40.00	932	Ethers, all sulphuric and the like, net weight ... ..	"	6.00	1.50
81	Magnesium carbonate ... ..	100 "	120.00	40.00	933	Esters, not specified, net weight ... ..	"	8.00	4.00
82	Magnesium sulphate ... ..	100 "	6.00	2.00	934	Formol and formalin, net weight ... ..	100 kilos.	30.00	15.00
83	Soda sulphate anhyd. ... ..	100 "	25.00	5.00	935	Acetone, methyl alcohol, crude methylene and denaturiser, net weight ... ..	100 "	240.00	80.00
84	Soda sulphate xtls. and nitrates not specified ... ..	100 "	10.00	2.50	936	Alumina, net weight ... ..	100 "	1.00	0.50
85	Natural mineral waters, also artificial for drinking ... ..	100 lit.	100.00	40.00	937	Alums, aluminium sulphate, chloride and acetate, and sod. aluminate, net weight ... ..	100 "	20.00	8.00
86	Salts from natural waters, crystals or powder, in packets, pastilles, or tablets, gross weight ... ..	per kilo.	2.00	1.00	938	Calcium acetate, net weight ... ..	100 "	30.00	15.00
87	Oxygenated water, net ... ..	100 kilos.	210.00	70.00	939	Ferrous sulphate, net weight ... ..	100 "	6.00	3.00
88	Perhydrol and like products, gross weight ... ..	100 "	400.00	200.00	940	Caffeine, sparteine and salts, net weight ... ..	per kilo.	10.00	5.00
89	Alkaline sulphides, also metallic do., gross weight ... ..	100 "	60.00	15.00	941	Quinine and salts, net weight ... ..	"	12.00	4.00
90	Antimony sulphide, gross weight ... ..	100 "	20.00	10.00	942	Morphine, cocaine and salts, net weight ... ..	"	16.00	8.00
91	Sulphites, bisulphites, metabisulphites, and alkaline hydrosulphites, gross weight ... ..	100 "	240.00	60.00	943	Atropine, codeine and eroin (?) and other alkaloids not specified, net weight ... ..	"	24.00	12.00
92	Hyposulphites, gross weight ... ..	100 "	75.00	25.00	944	Metol, hydroquinone, pyrogallol acid, pyrocatechin, amidophenols (amidol and rodinal), and other phenol compounds for photographic use, net weight ... ..	100 kilos.	400.00	200.00
93	Sulphites, bisulphites, liquid ... ..	100 "	20.00	30.00	945	Saccharin and like compounds, net weight ... ..	per kilo.	80.00	16.00
94	Copper sulphate, crystal, gross weight ... ..	100 "	25.00	10.00	946	Antipyrine, phenacetin, salipyrine and pyramidon, net weight ... ..	"	12.00	4.00
95	Compounds for the treatment of diseases of plants or cattle, with a base of copper sulphate, cyanides of soda or potash, arsenical salts, such as alkaline cyanides, arsenites of soda or potash, also insecticides with identical base composition, gross weight ... ..	100 "	10.00	5.00	947	Acid, salicylic, coml., net weight ... ..	"	1.00	0.50
96	Sulphate of ammonia, gross weight ... ..	100 "	1.00	0.10	948	Salicylates of soda, amyl, methyl and lithium, net weight ... ..	"	4.50	1.50
97	Alkaline phosphates, gross weight ... ..	100 "	30.00	15.00	949	Thymol and vanillin, net weight ... ..	"	20.00	10.00
98	Acid, hydrochloric, coml., gross weight ... ..	100 "	9.00	3.00	950	Eucalyptol, menthol, anethol, synthetic camphor, geraniol and other similar products, net weight ... ..	"	12.00	4.00
99	Acid, hydrochloric, pure, gross weight ... ..	100 "	20.00	10.00	951	Carbon bisulphide and tetrachloride, net weight ... ..	100 kilos.	75.00	25.00
100	Acid, fluoric, fluosilicic, fluorides and fluosilicates, gross weight ... ..	100 "	100.00	50.00	952	Trichlorethylene and trichloroethylene and other ethylene derivatives used as solvents, net weight ... ..	100 "	20.00	10.00
101	Acid, nitric, coml., gross weight ... ..	100 "	30.00	12.00	958	Salts, not specified, of potassium and sodium, gross weight ... ..	100 "	100.00	30.00
102	Acid, nitric, pure, gross weight ... ..	100 "	50.00	25.00	959	Ammonia, gross weight ... ..	100 "	200.00	35.00
103	Acid, sulphuric, coml., gross weight ... ..	100 "	10.00	4.00	960	Silver, net weight ... ..	per kilo.	45.00	15.00
104	Acid, sulphuric, pure, gross weight ... ..	100 "	24.00	12.00	961	Barium, strontium and calcium, gross weight ... ..	100 kilos.	100.00	25.00
105	Acid, sulphuric, fuming, gross weight ... ..	100 "	12.00	6.00	962	Magnesium, zinc, cadmium, gross weight ... ..	100 "	225.00	75.00
106	Sulphurous and sulphuric anhydrides alkaline polysulphides (liquid sulphur), gross weight ... ..	100 "	100.00	20.00	963	Copper, gross weight ... ..	100 "	100.00	50.00
107	Acid, hydrocyanic and cyanides, not specified, gross weight ... ..	100 "	20.00	10.00	964	Mercury, gross weight ... ..	per kilo.	6.00	3.00
108	Mercury cyanide and oxy. do., gross weight ... ..	100 "	5.00	2.50	965	Lead, gross weight ... ..	100 kilos.	140.00	70.00
109	Ferro and ferricyanides and nitro prussiates, gross weight ... ..	100 "	90.00	45.00	966	Nickel and cobalt, gross weight ... ..	100 "	100.00	50.00
110	Phosphoric acids and compounds not specified in other paragraphs, gross weight ... ..	100 "	200.00	35.00	967	Antimony, gross weight ... ..	100 "	110.00	55.00
111	Acid, boric, gross weight ... ..	100 "	50.00	25.00	968	Bismuth, net weight ... ..	per kilo.	10.00	5.00
112	Acid, citric, gross weight ... ..	100 "	240.00	80.00					
113	Citrate of lime, coml., gross weight ... ..	100 "	10.00	5.00					
114	Citrate of lime, pure, not for medicinal use, coml., gross weight ... ..	100 "	200.00	100.00					
115	Acid, acetic and pyroligneous, net weight ... ..	100 "	225.00	75.00					
116	Acid, lactic, coml., net weight ... ..	100 "	100.00	50.00					



No.	Article	Duties (pesetas)	
		First Tariff	Second Tariff
	Basis		
969	Gold, net weight ... .. per kilo.	80.00	20.00
970	Platinum, net weight ... ..	45.00	30.00
971	Tin, net weight ... .. 100 kilos.	80.00	40.00
972	Iron, gross weight ... .. 100 "	50.00	10.00
973	Chromium and manganese, gross weight ... .. 100 "	150.00	50.00
974	Aluminium, gross weight ... .. 100 "	150.00	50.00
975	Other chemical products, coml., not specified, gross weight ... .. 100 "	100.00	50.00
976	Other chemical products, pure and pharmaceutical, not specified elsewhere, gross weight ... .. 100 "	300.00	150.00
PHARMACEUTICAL PREPARATIONS—			
c 982	Pills, capsules, sugar-coated tablets, tablets and granular medicinal products of all kinds, and the like products, in bulk, net weight ... per kilo.	12.00	4.00
PHARMACEUTICAL SPECIALITIES—			
c 983	Medicinal wines, net weight ... ..	12.00	4.00
c 984	Specialities containing sugar, glucose, saccharin or the like, without alcohol, net weight ... ..	15.00	5.00
c 985	Specialities containing sugar, glucose, saccharin or the like, with alcohol, not specified, net weight ... ..	15.00	6.00
c 986	Other pharmaceutical specialities, net weight ... ..	12.00	6.00
c 987	Sera and vaccines, net weight ... ..	6.00	3.00
c 988	Products of animal origin used in medicine, net weight ... ..	0.30	0.10
c 989	Animal and organo-therapeutic preparations, net weight ... ..	20.00	10.00
1000	Cinchona plant, net weight ... .. 100 kilos.	15.00	5.00
1001	Cinchona extract, net weight ... .. 100 "	200.00	100.00
1002	Opium, pats or powder, net weight ... .. 100 "	60.00	20.00
1003	Opium extract, gross weight ... .. 100 "	220.00	110.00
1004	Coca, leaves or powder, gross weight ... .. 100 "	15.00	5.00
1005	Coca extract, net weight ... .. 100 "	150.00	75.00
1006	Medicinal extracts not specified, net weight ... .. 100 "	300.00	150.00
1007	Extract of liquorice, gross weight ... .. 100 "	175.00	70.00
1008	Extract of quebracho, gross weight ... .. 100 "	70.00	25.00
	Vegetable products employed in medicine, not specified—		
1017	Unmanufactured, gross weight ... .. 100 "	30.00	15.00
1018	Ground, gross weight ... .. 100 "	60.00	30.00

ALLOWANCE FOR CONTAINERS.—*Perfumery*, in pots or bottles, 25 per cent. total weight. *Pharmaceutical Products* in bottles where the total weight is from 250 to 1,000 gms., 15 per cent. for the tare—25 per cent. in cases where the total weight does not reach 250 gms.

ARTICLES MARKED WITH LETTER "c"—In cases of shipments of these, the goods must be accompanied by a certificate of origin. This document is required to be drawn up by a competent authority in the place of despatch, certifying that the goods are manufacture or production of the nation, the name and address of the producer, or manufacturer, to be given, together with the number, kind, marks, gross weight of the packages, and a specification of the produce. The certificate must be drawn up in Spanish or French and viséd in the place of manufacture by the Spanish Consul. These conditions must be observed if the goods are to be considered for payment of duties under the second column. In the case of despatch of the same goods by parcel post, this may be done without the certificate of origin, provided that they proceed from a country having Commercial Treaty with Spain and have not been despatched in a frontier station. For such merchandise to be considered as dutiable under the second column, the above conditions being fulfilled, the gross weight shall not exceed 10 kilos, and not more than five parcels may be sent in the same expedition, by the same consignor to the same consignee, the total gross weight not to exceed 25 kilos. Should any of these conditions not be complied with, the goods will be rated as under the first column.

AFTER APRIL 1 Polish pharmacists will be forbidden to employ pharmaceutical assistants of German nationality.

WOOD-DISTILLATION PRODUCTS.—Conditions in the wood-distillation industry in the United States are still very much unsettled. While there is no great demand for either methyl alcohol or formaldehyde, it is also true that about 80 per cent. of the crude distillation plants are closed. Stocks on hand of crude wood alcohol and of acetate of lime have materially decreased within the past eight months. While it cannot be said that prices are stiffening, the downward tendency seems to have been definitely checked. In fact, it is growing somewhat difficult to fill orders for crude wood alcohol, since owners are reluctant to sell at prevailing prices. Acetate of lime is also held in firm hands, and there has been a slight increase in price within the last four weeks.

## Chemical Society

At the meeting of the Chemical Society held in Burlington House, London, W., on February 16, the President, Sir James Walker, F.R.S., in the chair, four papers were read. Professor A. Lapworth presented a paper on *A Theoretical Derivation of the Principle of Induced Alternate Polarities*, in which he explained his conception of induced polarity, which is theoretically based on the symmetry of the benzene ring, but is also applicable to compounds of the aliphatic series possessing alternating single and double links. In this connection the signs "−" and "+" are used to denote those groups of atoms which, brought into contact with an electrolyte, enter into ionic combinations. On investigating a number of compounds it was found that the constituent groups possessed alternate − and + polarity. Particular interest attaches to the fact that the oxygen atom, or, in the absence of oxygen, nitrogen, determines the arrangement of the polarities in the molecule. This observation leads to the assumption of the presence of "key atoms," which have a determining influence on the polarities of a compound, and in this respect it was found that oxygen, nitrogen, chlorine, carbon, and, last of all, hydrogen, in the order named, exerted a correspondingly marked effect. In a system of atoms which is acted upon by key atoms we are compelled to assume that there is a maximum and minimum valency—that is to say, that in certain circumstances an atom acquires an increased valency, or may surrender a certain amount of its valency to other atoms. The author illustrated these various assumptions by means of numerous slides, showing the different forms of linking in a number of compounds under the influence of induced polarity, and referred to the relationships existing between this theory and the Lewis-Langmuir atomic theory, and its effect on our views on valency and bonds in compounds.

Practically the same ground was covered in the paper on *An Explanation of the Property of Induced Polarity of Atoms and the Interpretation of the Theory of Partial Valencies on an Electronic Basis*, presented by Professor R. Robinson (in collaboration with W. O. Kermack). The authors are of opinion that the modern electronic theory of atoms is not inconsistent with former opinions held regarding the constitution of chemical compounds. The Lewis-Langmuir theory was adduced in support of the theory of induced polarities, and it was explained that a negative atom is constituted by a stable octet, which adheres strongly to its electrons. When this octet is broken up by entering into combination with another atom, or several atoms, as in a compound, then we have alternately stable and unstable octets in this compound, expressed as − and + polarities. Basing on the assumptions advanced, the relative activity of the key atoms in compounds and their influence was discussed.

*Some Reactions of Benzanthrone* formed the subject of the paper read by Dr. A. G. Perkin (with G. D. Spencer), who found that on fusing benzanthrone with fused potassium hydroxide and potassium chlorate a highly fluorescent compound—oxybenzanthrone—was obtained, the formula of which was then discussed. The authors also succeeded in producing hydroxybenzanthrone and the ethoxy compound. They further established that in using for the reaction benzanthrone containing traces of anthraquinone it was possible to convert the former into the hydroxy compound, whereby the anthraquinone was reduced to tannic acid. The resulting product is a strongly fluorescent orange salt, which is not capable of use as a dye.

Owing to the advanced hour, Mr. I. W. Wark only referred very briefly to the subject of his paper, *A Rapid Iodimetric Estimation of Copper and Iron in Mixtures of their Salts*. He alluded to the methods already known for estimating by titration iron and copper in solutions, and stated that in his paper he explained a method based on the addition of a mineral acid to a solution containing salts of both metals, permitting their estimation by two successive titrations. The method is accurate to 5:1,000, but is not suitable in dealing with a low percentage of iron or copper; on the other hand, it has the advantage of permitting a rapid estimation of these two metals with sufficient accuracy for practical purposes.



## Trade Report

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling and the like. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities.

42 Cannon Street, E.C. 4, February 23

THE reduction in the Bank rate last week has not yet been reflected in the Mincing Lane produce markets by an expansion of business, but at the same time cheaper money acts as a much-needed stimulus in the restoration of confidence. Another feature is the further rise to over \$4.40 which occurred in the value of the pound sterling in terms of dollars; this makes the British sovereign worth just over 18s. 1d. on the basis of dollar exchange. French francs have also improved in value, being well below fifty. Among outstanding changes in values is a sharp rise in spot and delivery shellac, based on scarcity and speculation; the aggregate rise on the week amounts to about 25s. to 30s. per cwt. Menthol has been the subject of quiet buying at below current prices, but closes rather firmer. Senega is again higher, with spot stocks concentrated. Japanese refined camphor is easy. Opium is steady, with spot stocks of Turkish dwindling; nux vomica is flat, although lower prices are quoted forward. Canary seed is quietly firm and hemp is easier. Linseed oil and turpentine are lower. Cocoa-butter has further advanced. Cape aloes, buchu, and ipecacuanha have an easy undertone. Insect-flowers and agar agar are scarce.

Higher	Firmer	Easier	Lower
Carbolic acid	Acetone	Barium	Ammon.
Celery seed	Canary seed	chloride	benzoate
Cocoa butter	(Mazagan)	Benzaldehyde	Aniline oil
Hen-yolk	Pepper (white)	Bergamot oil	Condurango
Senega	Muntok)	Buchu	Copper
Shellac	Phenacetin	Camphor (Jp. ref.)	sulphate
Sodium sulphide		Cottonseed oil	
		Clove oil	Litharge
		Cloves (Zan.)	Lubricating
		Coconut oil	oils
		(Ceylon)	Methyl sul-
		Geranium oil	phonal
		Groundnut oil	Platinum
		Guaiacal carb.	Sodium nitrite
		Hemp seed	Strychnine and
		Lemon oil	salts
		Menthol	White oils
		Mint oil (Jp.)	
		Naphtha	
		Palm oil	
		Patchouli oil	
		Potash chlorate	
		Quinine sulph.	
		(sec.-hands)	

### Cablegrams

NEW YORK, February 21.—Business is quiet. Opium has advanced to \$5.75 per lb. for druggists', and senega is also dearer at \$1.00. Canada balsam has advanced to \$12.00 per American gallon, and Oregon balsam of fir to \$1.45. Mercury is higher at \$50.00 per flask. Curaçao aloes in cases is cheaper at 6½c., and buckthorn bark has declined to 7c. per lb. Formaldehyde is lower at 9½c. per lb.

BERGEN, February 22.—The total catch of cod for the whole of Norway since the opening of the season amounts to 3,300,000, against 3,900,000 for the corresponding week of last year, and the yield of steam-refined medicinal oil is 6,845 hectolitres, against 6,803 hectolitres for the same period of 1921. The market for finest new non-freezing medicinal oil is quiet at about 95s. per barrel c.i.f.

### Crude Drugs, etc.

AGAR AGAR is dearer, No. 1 Kobe offering at 3s. 9d. per lb. and No. 2 at 3s. 5d. on the spot. To arrive new crop is 3s. 6d. and 3s. 1d. c.i.f. respectively.

ALMOND OIL.—Finest French, sweet, is quoted on the spot at from 1s. 10d. to 2s. 1d. per lb., according to holder.

ALOES.—Cape continues easy, firsts offering at from 32s. 6d. to 35s., and seconds 28s. to 30s., down to 25s. for dull coarse. Good Curaçao livers can be had at 90s. to 95s., and ordinary dull to fair 60s. to 75s. per cwt.

ANTIMONY.—Chinese crude is in poor demand, but holders of spot lots maintain their terms at fully £16 per ton, despite the cheap offers heard of for shipment down to £13 c.i.f. English regulus is selling in retail lots at £37 to £39, according to brand, but good lines are to be had at fully £2 less. Foreign for delivery to home users is £23 10s. to £24, but there are sellers for export at well under this.

BALSAM TOLU is still scarce and firm on the spot. Good hard bright has been sold at 2s. 6d., and fair at 2s. 4d. per lb.

BUCHU is easier, fair green round offering at 4s. 9d. per lb.; ovals are steady at from 4s. to 4s. 3d. per lb.

CAMPHOR (CRUDE) on the spot is quoted at 3s. 4½d. to 3s. 6d. per lb. and February-April shipment at 3s. 1½d. c.i.f.

CAMPHOR (REFINED).—Japanese is quiet, with spot sales of 2½-lb. slabs at 3s. 9d. to 3s. 10d., and for February-April shipment 3s. 6d. to 3s. 7d. c.i.f. is quoted.

CELERY SEED has shown a gradual advance during the past fortnight, French shippers claiming they cannot sell under 78s. c.i.f. Spot value is about 85s.

CHAMOMILES of the 1919 Belgian crop are selling at from 230s. to 235s. per cwt. on the spot; new crop is nominal.

COCOA-BUTTER is again higher, prime English ex works being 1s. 11d. per lb. in not less than 1-ton lots.

COD-LIVER OIL.—Our Bergen correspondent writes on February 18 that the catch of cod at Lofoten last week was poor owing to stormy weather, the output up to date being as follows:

	Catch of cod (millions)	Yield of steam-refined cod-liver oil (hect.)	Livers for crude oil (hect.)
To February 11, 1922	2	4.099	1.097
" 13. 1921	2	3.865	550
" 14. 1920	2	3.280	1.000

Little animation is shown on the Bergen market, and the supplies of new oil are still small. The tendency seems to be easier, prompt shipment of 1921 oil offering at about 98s. per barrel c.i.f. and later shipment of new oil at slightly less. In London, sales of finest new Lofoten oil are reported at 95s. per barrel c.i.f.

CONDURANGO has been sold cheaply at 3½d. per lb. on the spot for good quality, at which further lots can be had.

ERGOT is in slightly more inquiry. Russian is obtainable at 4s. 1½d., and Spanish at 4s. 3d. per lb. on the spot.

GALLS.—Chinese are easier for shipment than when last quoted, February-March shipment offering at 62s. c.i.f. for ordinary and 72s. c.i.f. for plum shape; on the spot ordinary are quoted at 72s. 6d. and plum shape at 80s. per cwt. Blue Persian offer at 65s., and green at 55s. per cwt. on the spot.

GLUCOSE.—Guaranteed water-white for February delivery is 26s. per cwt., duty paid, landed terms.

HEN-YOLK is dearer, with spot sales of Chinese at 125s. to 130s. per cwt., and for April-June shipment sellers quote 75s. c.i.f. Dried yolk is 3½d. per lb., sprayed whole egg 5½d., native dried whole 3d. per lb., all spot. Prime hen-albumen on spot is 2s. 10d., and sellers of April-June shipment quote 2s. 7d. per lb. c.i.f.

HONEY meets with a steady demand, particularly Jamaica, Cuban, and Australian. Good pale Jamaica is offered at 55s. and dull straw at 45s., down to 35s. for dark amber. Fair pale set Cuban is selling at 45s., down to 35s. per cwt. for manufacturing quality. Australian has changed hands at prices varying from 30s. to 37s. 6d. for inferior to palish set.

INSECT FLOWERS.—Both Dalmatian and Japanese are scarce on the spot; the former offer to arrive at the higher price of 285s. per cwt. c.i.f.

IPECACUANHA.—With fair stocks the market continues weak at from 5s. 6d. to 5s. 9d. for Matto-Grosso.

JUNIPER BERRIES.—Italian offer at 16s. 6d. per cwt. c.i.f. to come forward.



**LIQUORICE ROOT.**—Natural Levant varies from 22s. to 27s. per cwt., according to quality and holder, while for a parcel of whole decorticated now landing 97s. 6d. is wanted.

**MENTHOL.**—A fair amount of quiet buying has been done of late at prices not reported; 23s. 6d. is the spot value of Kobayashi-Suzuki in single cases, and 23s. for quantity.

**MERCURY.**—There is no alteration in the market; the bulk of the business being done relates to Italian, the price of which is found attractive enough at around £11 to £11 2s. 6d. per bottle. The figures showing the extremely low production for last year in the United States cannot fail to exert a certain influence on future prospects, as it seems only a question of time when the United States must resort to larger importations from the main European production sources. A certain amount of Mexican mercury finds its way into that country, but the quality of this metal appears to leave something to be desired, and this accounts for the fact that it is usually marketed at a notable discount compared with either American or imported metal from other sources.

**NUX VOMICA** is flat, and although cheaper offers have been made to come forward, including Madras at 27s. per cwt. c.i.f., they fail to interest buyers.

**OLIVE OIL.**—Italian edible cream is offered on the spot in tins and cans (10 tins to a case) at 10s. 6d. per gallon and 40-gallon drums at 9s. 9d. to 10s. New crop Italian is offered in pipes at £108 per tun c.i.f. for "extra cream" and at £104 c.i.f. for "finest cream." Half-pipes are £110 and £106 per tun respectively, to come forward.

**OPIMUM.**—In the absence of fresh imports from Turkey, spot stocks of this description are gradually diminishing, the price for good druggists' quality being from about 11s. to 12s. per lb. The last price cabled from Smyrna was 9s. 10d. c.i.f., but with the rate of exchange fluctuating some 15 per cent. either way, there is no inducement to import.

**SMYRNA, January 31.**—Notwithstanding the restrictions by England, America, etc., we have again to report fairly good sales every week, which amount in all to 101 cases for this month. The average price paid for above quantity in piastres is 776.50 per oke, but the reduction to sterling or dollars per lb. of above depends entirely on the falling exchange. We started the year with an exchange of ps. 720 per £ sterling for cheque and \$0.58 per Turkish £, and to-day we are at ps. 650 for the former and \$0.66 for the latter; therefore the above average opium piastre price will be 8s. 9d. per lb. for the beginning of the month, and now 9s. 4d., compared with \$1.65 and \$1.96 respectively. Our stock in first and second hands is now 1,336 cases.

**ORRIS** still continues very cheap, fair Florentine sorts offering at £35 and Verona at £23 per ton c.i.f. to come forward.

**PLATINUM** has developed marked irregularity, due to sharp competition between leading and outside refiners, and its tendency has been on the whole weaker. Raw metal is obtainable at between £17 and £18, and manufactured between £19 and £20 per oz., although quotations in some quarters are £1 to £2 above these rates.

**RHUBARB** remains firm for the better qualities, good bold heavy round Shensi offering at 5s. 3d. per lb.

**SENEGA** is again higher; our last report closed at 4s. 9d., but before the week finished up to 5s. 3d. had been paid on the spot, and it is claimed that nothing less than 5s. 6d. will now buy, which is still below the parity of the price to come forward. Spot stocks are concentrated in the hands of two or three holders, and it is said that offers cabled from New York to the sources have failed to elicit replies.

**SENA.**—Since the auction a fair amount of quiet buying of Tinnevely has been taking place, chiefly at about 2d. per lb. for jungle leaf, it being recognised that this is one of the cheapest drugs on offer. Sales at this price show a considerable loss to importers, owing to the excessive Port of London charges, and it is doubtful even if it covers the cost of freight alone. Fairly bold green leaf is obtainable at 7d., good green medium at 5d. to 6d., and common small 2d. to 2½d. per lb.

**SHELLAC** is much dearer, the spot price of usual standard TN Orange quality having advanced fully 20s. per cwt.

since last week, up to 350s. to 355s. per cwt. having been paid; fine second Orange is 370s. to 390s.; superfine, 420s.; RL1, 400s. to 410s.; AC cakey, 310s.; GAL, 290s.; and IG, 220s. Futures show an advance of about 25s. to 30s. per cwt., the sales including TN Orange for March delivery at from 322s. 6d. to 350s. to 340s. and May at from 320s. to 350s. to 340s. per cwt.

**STARCH PRODUCTS** are steady. Pure English rice crystals offer at £36 per ton; maize starch-powder has sellers at £13 10s. per ton spot. Spot sellers of Dutch farina quote 26s. 6d. per cwt., and Japanese, for February-March shipment, is 24s. 6d. per cwt. c.i.f.

**WAX (BEES')** has shown more inquiry of late, the following being current quotations: Jamaica, £7 to £7 10s.; bleached Calcutta, £7 to £7 10s.; good Sierra Leone, 77s. 6d. to 80s.; Abyssinian, 80s. to 85s.; East African, 75s. to 80s.; and dark, 65s. to 70s. per cwt.

**WAX (VEGETABLE).**—Carnauba is quoted at 80s. per cwt. for waxy grey and 75s. for chalky. Japanese is offered at 90s. per cwt. on the spot, and to arrive at 83s. c.i.f.

### Seeds and Spices

**CHILLIES.**—The sales in Liverpool include 250 bags at from 135s. to 140s. per cwt.

**CLOVES.**—Zanzibar continue quiet, fair offering at 1s. 4d. per lb., and for March-May shipment 1s. 1½d. c.i.f. is quoted.

**GINGER.**—Spot stocks of Cochin and Calicut are light, and forward prices show a considerable advantage; buying up to the present has not been heavy, and prices, which started fairly high, have gradually been reduced in order to attract business. Owing to the trouble in India several offers have been withdrawn. Sound Jamaica is still 230s. to 240s. and common Rhatoon 200s. New crop Sierra Leone is quoted in Liverpool at 36s. per cwt. to arrive.

**MACE** has been in fair inquiry, and only small quantities are offered, in spite of which prices remain at about pre-war level.

**NUTMEGS.**—The private market for Singapore and Penang has been firmer, especially the larger sizes. Sound West Indian are scarce, and no further shipments are expected for some time.

**PEPPER** is steady, with spot sales of fair black Singapore at 3½d. to 4d. per lb. Lampong is 4½d., Tellicherry is 4½d., and Aleppy 4½d. per lb., all spot. To arrive, fair Singapore for February-April and March-May shipment has sellers at 3½d. per lb. c.i.f. d.w. White pepper is firmer, with sales at 8d. to 8½d. for fair Muntok on the spot; for March-May shipment business has been done at 7½d. to 7½d. c.i.f. d.w. White Singapore on the spot is 7½d., and February-April shipment has sellers at 7½d. c.i.f.

**PIMENTO** is quiet, with spot sellers at 2½d. per lb., and to arrive at 20s. per cwt. c.i.f.

**SEEDS.**—The following are current spot quotations: Spanish ANISE is 77s. 6d. per cwt.; Russian is unchanged at 70s. CANARY SEED is quietly firm, with Mazagan offering at 80s. to 85s. per quarter; Larache is 70s.; Spanish is 100s. Morocco CARAWAY is firm at 26s. per cwt., and Dutch is 35s. to 37s. Sound CORIANDER, 28s. 6d.; wormy, 12s. to 23s., as to quality. CUMIN SEED is still scarce at 55s. per cwt. for fair quality. DILL SEED is obtainable on the spot at 27s. per cwt. FENNEL SEED is 47s. 6d. per cwt. for sound in Liverpool. FENUGREEK SEED is 10s. 9d. to 11s. 6d. per cwt., as to quality. Manchurian HEMP SEED is easier at 17s. per cwt. Morocco LINSEED is 24s. 6d. per cwt. on spot. Good English yellow MUSTARD SEED is 34s. per cwt. on the spot.

### Essential Oils

**BUSINESS** continues quiet in this section, and a slight downward movement is noted in several articles. Lemon oil has declined a few points in value, but spot is still higher than it was recently; some holders anticipate a continued firmness. Bergamot oil is a shade easier. Clove, Bourbon geranium, Japanese mint, and patchouli oils are tending lower. Aromatic and synthetic chemicals, with the exception of coumarin, which is steadily advancing on the spot, are dull.

**ALMOND.**—Genuine bitter, s.a.p., is offered on the spot at from 19s. to 20s. per lb. for imported.



**ANISE (STAR).**—"Red Ship" has been in demand at 1s. 11d. per lb., at which there are still buyers, but cheap sellers have withdrawn, and 2s. is again the spot quotation for quantity. Business might be entertained at 1s. 11d. c.i.f., but prices come at above 2s.

**BAY.**—West Indian is quiet and unchanged at from 12s. 6d. to 14s. 6d. per lb., according to percentage.

According to a report issued recently from the Agricultural Department, St. Lucia, the bay oil industry has not made the progress that was looked for when the industry was commenced in 1914. There is no scarcity of bay leaves in the Colony, and if the present factories could be run steadily throughout the year, a satisfactory and profitable industry could be built up. The quantities, in gallons, with values of bay oil, shipped during the last five years are as follows: 1916, 606 gall., value £1,090; 1917, 616 gall., value £1,153; 1918, 223 gall., value £443; 1919, 663 gall., value £2,538; 1920, 603 gall., value £2,075.

**BERGAMOT** is slightly easier to come forward at from 18s. to 18s. 6d. per lb. c.i.f. for 37/39 l.a. Spot is quoted at from 19s. 6d. to 20s. 6d., according to holder.

**CAMPHOR.**—On the spot white essential is not in much demand at 100s. to 105s. per cwt. For cases 115s. is wanted in some directions. Brown has been sold at 95s. spot, in drums.

**CARAWAY.**—Rectified is unchanged at from 7s. to 7s. 6d. per lb. on spot, with prices tending rather firmer.

**CASSIA.**—For spot, 80 to 85 c.a., 4s. 9d. per lb. is the general figure. For shipment February-March 4s. 3d. to 4s. 5d. c.i.f. is quoted.

**CEDARWOOD** is unchanged on the spot at from 1s. 8d. to 1s. 11d. per lb., in drums, as to seller.

**CINNAMON.**—Ceylon leaf is unchanged at 5½d. to 6d. per oz. spot and 5½d. c.i.f. High-testing oil is cheaper for March shipment at 9s. per lb. c.i.f.

**CITRONELLA.**—Ceylon is firmer on the spot, and some holders have refused bids of 2s. 1d. per lb. A little may be obtained in other directions at 2s. 0½d. Java is unchanged at from 2s. 11d. to 3s., and Burmesic is steady at from 3s. per lb. for oil testing 92½ per cent.

**CLOVE.**—English distilled is easier at 10s. 3d. to 10s. 6d. per lb. spot. For delivery at the end of March 10s. is the price.

**EUCALYPTUS.**—B.P. is steady at from 1s. 6d. to 1s. 7½d. per lb. for 70 to 75 cineol, according to quality. Higher percentages are proportionately dearer. *E. Amygdalina* is quoted at 1s. 7d. to 1s. 8d., and *E. Citriodora* at from 7s. 9d. to 8s., according to quantity.

**GERANIUM.**—Consignors of Bourbon have now shipped most of the available supplies to Europe, and the lowering of prices in London is said to be due entirely to the present slow demand from consumers. Spot is now about 21s. to 22s. per lb. Algerian ranges from 27s. to 30s. as to seller.

**GUAIACWOOD** has been in fair demand at 19s. per lb. spot.

**JUNIPERBERRY.**—B.P. oil is quoted on the spot at from 7s. to 7s. 6d. per lb., according to seller. There has been a good demand recently.

**LEMON.**—Spot sales have been made at 3s. 4d. to 3s. 6d. per lb., which is about the value for new-crop oil. This is below last week's figure, the c.i.f. price showing a similar decline to 3s. 5d. Some importers anticipate that prices will gradually advance as the season approaches.

According to this month's "Anglo-Italian Review" (February 1922), with a view to reducing the slump in essential oils the State Railways are arranging to use oil of lemon in place of turpentine as a diluent for the paints and varnishes used in their workshops. [This probably refers to the oil held over from previous crops, as lemon oil does not improve on keeping.—Ed.]

**LEMONGRASS.**—Cochin is dull and unsteady at 2½d. to 3d. per oz. spot. The c.i.f. price is 2½d., but the last business reported was slightly above this.

**LIME.**—West Indian distilled is unchanged at 2s. 3d. per lb. spot. The "Commodore" has brought seventy packages of lime oil from Dominica.

**MANDARIN** is offered at irregular prices. Importers quote from 20s. 6d. upwards per lb. for old crop oil on the spot. The c.i.f. price for new crop is 17s. 6d. upwards.

**MINT.**—Japanese dementholised is easier at 5s. to 5s. 3d. per lb. spot for Kobayashi-Suzuki. The c.i.f. prices are very irregular.

**ORANGE.**—Sicilian sweet is unchanged on the spot at 12s. 6d. to 13s. per lb. The c.i.f. price is about 12s. 3d.

**PATCHOULI** is quiet and tending easier on the spot with sellers at 40s. to 42s. 6d. for Penang or Mysore distilled.

**PEPPERMINT.**—American natural tin oil is unchanged at 9s. per lb. spot, with the c.i.f. price at about 8s. 8d. Bids slightly under have been cabled out for acceptance.

**ROSEMARY.**—Spanish in drums is unchanged at 2s. to 2s. 3d. per lb.

**SANDALWOOD.**—The present political position in India is being considered with interest in regard to its possible effect on deliveries of this oil, and while there is no official intimation of any difficulties as yet, the likelihood of the natives ceasing work and the stoppage of transport should not be lost sight of by consumers, who might be well advised to consider their future requirements now. There are fair stocks here, and while the nominal official price is 30s. per lb., Mysore Government B.P. oil is obtainable at 27s. 6d. spot.

**SASSAFRAS.**—Genuine natural is unchanged at from 6s. 3d. to 6s. 9d. per lb. spot.

**SPERMINT.**—American has been further reduced to come forward, 12s. per lb. c.i.f. being the price. Spot is quoted at 14s.

**SPIKE.**—The primary markets have remained quite steady, but some holders have reduced their price as spot demand is slow. There are sellers at from 5s. 9d. to 4s. per lb. in drums.

**VEITIVERT** is in fair supply on the spot, Bourbon being quoted at 20s. to 21s. per lb., according to seller. Java is unchanged at about 50s.

**WINTERGREEN (SWEET BIRCH OIL).**—The c.i.f. price is 14s. per lb.; on the spot holders quote from 14s. to 15s.

#### Pharmaceutical Chemicals, etc.

THE continued steadiness governing the fine chemical market is reflected by the decrease in the number of falls in value and the comparatively few numbers of weak holders, who have hitherto been in the habit of "cutting" prices. Business seems to vary, some reports state quite a fair amount passing, whilst others indicate that there is very little doing. Continental quotations for forward positions continue to advance, and this fact is bound eventually to have a hardening effect on the spot market. Methyl sulphonal and benzaldehyde are cheaper. Phenacetin is much firmer. Strychnine and salts are lower. Pure caffeine is rather cheaper, owing to competition. The transport difficulties of goods traffic by rail in Germany are daily increasing, especially on lines leading to the German ports, where a considerable congestion exists. Goods designated for shipment from these ports and handed in at the various stations in Germany remain stored at the latter for an unusual long period until permission is granted for the despatch of same to these ports, which periodically takes place. It is, therefore, hardly possible for the manufacturers to definitely state when the goods will be shipped.

**ACETANILIDE** is holding up well at about 1s. 4d. per lb., with some asking up to 1s. 5d.

**AMIDOPYRIN** remains sluggish, but quotations are still at 18s. per lb.

**AMMONIUM BENZOATE** has eased off considerably, and there are sellers of good quantities at 4s. per lb. on spot.

**ASPIRIN** remains in the region of 3s. per lb., with the usual small business passing.

**BARBITONE** is steady at 11s. to 11s. 3d. per lb., with a few offers at 11s. 6d.; the demand is light.

**BENZALDEHYDE (.03)** is a shade weaker and slack at 4s. per lb.

**BETANAPHTHOL** continues idle, with values nominal at 2s. 3d. per lb. upwards.

**BROMIDES.**—The demand on spot is light, and there are a number of doubtful parcels offering at low figures. Good stuff is generally quoted at: Ammonium, 10½d. to 11d.; potassium, crystals and granular, 8½d. to 9d.; sodium, 9½d. to 10d. per lb.

**CAFFEINE.**—Makers' prices are unsettled owing to competition, and although 20s. per lb. is the nominal price



of the pure alkaloid, 18s. would be accepted, and, where necessary, competition with the imported product is being met.

CALCIUM LACTATE is well held at 2s. 3d. to 2s. 3d. per lb., but there is no great demand.

CHLORAL HYDRATE—duty paid—is unchanged on a slow market at 5s. to 5s. 3d. per lb.

CITRIC ACID continues almost stagnant and nominal at 1s. 11d. per lb., less 5 per cent.

COUMARIN.—Sales are reported at 10s. 9d. on the spot, which is firmer than last week's quotation.

CREAM OF TARTAR from British makers is steady at 120s. to 125s. per cwt., according to quantity. A fair business is being done.

CREOSOTE B.P. holds on a slow market at 3s. 3d. to 3s. 6d. per lb.

CREOSOTE CARBONATE is unchanged at the low figure of 10s. 6d. per lb.

EUQUININE.—A parcel is offered at 7s. to 7s. 6d. per lb.

GUAIACOL CARBONATE is easier, with still a dull market, at about 10s. 6d. to 11s. per lb.

HENAMINE remains steady and occasionally in demand at about 3s. 6d. per lb.

HYDROQUINONE is neglected and nominal at about 4s. 3d. per lb. on spot.

METHYL SALICYLATE is steadier this week at the unchanged prices of 2s. 3d. to 2s. 6d. per lb.

METHYL SULPHONAL is cheaper this week, but still seldom asked for: sellers at 16s. per lb.

MILK SUGAR can be had at 145s. to 150s. per cwt. on the spot for finest powder, with business at these figures.

PARA-FORMALDEHYDE is holding well at 3s. 3d. to 3s. 6d. per lb.

PARALDEHYDE is in ample supply on spot, and dull and weak at 1s. 8d. to 1s. 10d. per lb.

PHENACETIN is a much firmer market, and most offers are well maintained at 5s. 3d. to 5s. 6d. per lb.

PHENAZONE is difficult to find on offer below 7s. 6d. to 7s. 9d. per lb., and there have been a few inquiries about.

PIPERAZINE on spot is weak, with good stocks offering at 4s. per oz.

POTASSIUM PERMANGANATE.—B.P. is offered at 8½d. per lb. and upwards, according to quantity; a fairly active market.

QUININE.—A fair jobbing business is reported from second-hands at 2s. 9½d. per oz. for sulphate.

RESORCIN is weak and dull from actual holders of stocks at 6s. 9d. to 7s. per lb.

SAFROL is steady at from 3s. 3d. to 3s. 4d. per lb.

SALICYLIC ACID remains dull, and values are far from steady; quoted from 1s. 4d. to 1s. 6d. per lb. for B.P. powder.

SILVER NITRATE.—The price of crystals on February 22 was based on a metal price of 33½d. per oz. as follows: In quantities of 50 oz., 2s. 1½d.; 100 oz., 2s. 0¾d.; 250 oz., 2s. 0¼d.; 500 oz., 1s. 11¾d.

SODIUM BENZOATE is unchanged and steady at 1s. 6d. to 1s. 9d. per lb.

SODIUM DIETHYLBARBITURATE is unsteady and slow to move, varying on quotation from 17s. 6d. to 18s. 6d. per lb.

SODIUM SALICYLATE remains quoted fairly steady, and is likely to hold at present figures: Crystals, 2s. to 2s. 6d.; powder, 1s. 11½d. to 2s. 3d. per lb., according to quantity and brand.

STRYCHNINE.—Makers' prices show a reduction of 9d. per oz. as from February 18, current quotations in bulk being as follows: B.P. crystals 5s. 9d., powder 5s. 7d. per oz.; acetate 5s. 3d., arseniate 5s. 1d., bisulphate 4s. 7d., cacodylate 10s. 5d., citrate 5s. 3d., hydriodid. 6s. 2d., hydrobromide 5s. 4d., hydrochlor. B.P. 5s., hypophosph. 7s., nitrate 4s. 11d., phosphate 5s. 6d., sulphate 4s. 9d., and valerianate 7s. 5d. per oz. net.

SULPHONAL is unchanged but dull at 15s. 6d. per lb.

TANNIC ACID.—Leviss remains steady at 5s. 3d. to 5s. 6d. per lb.

TERPENE HYDRATE is quoted at 2s. 6d. per lb. on a weak and dull market.

TERPINEOL is quoted at from 2s. to 2s. 3d. per lb., and German at 2s. 6d.

THYMOL continues quiet, with offers still at 22s. per lb.

## Heavy Chemicals

London, February 22.

THE steadier tone recently recorded in industrial chemicals is reflected in the very few changes that are now taking place in values. During the past week business has certainly been confined to small lots only, but there are unmistakable signs that this slight improvement will continue, and perhaps gradually be the forerunner of an all-round increase in demand.

ACETIC ACID on the spot is now only held in limited quantities, and as further stocks can only be imported at higher prices the spot prices are firmly held at: 80 per cent. technical, £46; 80 per cent. pure, £47; 98 per cent. glacial, £53 per ton, packages free; inquiry continues fair.

ACETONE has been asked for quite briskly, and spot supplies are short. British Government specification is firmer at £77 per ton, drums free.

ALUM.—Lump quoted on spot is about £13 10s. for Continental, with British makers asking £16 per ton delivered, for home trade only.

ARSENIC.—The market has continued colourless, the demand being very restricted, yet prices hold up remarkably well at from about £39 to £40 per ton for white Cornish delivered London. The current supply is apparently light, while imports are not very important.

BARIUM CHLORIDE from British makers is unchanged at £15 per ton, and imported material is offered a shade cheaper, but there seems to be very little call on the market.

BARYTES is well held at £4 10s. to £6 10s. per ton, as to quality, and some few sales have been made.

BLANC FIXE remains quoted unaltered at £22 10s. per ton c.i.f. London.

BLEACHING POWDER (35 to 37 per cent.), from British makers for home trade only, packages extra, is unchanged at £14 per ton. Continental offers f.o.b. Hamburg, £12 10s.

COPPER SULPHATE.—There has been a moderately active demand for export, and in view of the substantial fall in the price of rough-bar copper, makers' terms are rather easier at around £27 10s. per ton f.o.b. for casks, less 5 per cent. Competition seems very keen, but the prospect of the export trade is better, while the lower Continental rates of exchange should help in stimulating new business.

EPSOM SALTS.—Commercial quality remain stagnant and nominal at £7 10s. per ton in single bags.

FORMALDEHYDE is perhaps a shade easier on spot, with some few small lots offering ex wharf London at about £72 to £75 per ton; very little inquiry.

GLAUBER'S SALT.—Commercial quality is nominal at £5 10s. per ton; no demand.

LEAD ACETATE on the spot seems unwanted, with offers at: Brown, £35; white crystals, £43. British makers' prices are a little higher at: Brown, £33; white, £42 per ton.

LEAD PRODUCTS.—Although there has been no further official alteration in home makers' terms since the important revision reported in our previous issue, it is not improbable that another downward revision will ensue in consequence of the continuous heavy fall in pig lead, which has now collapsed to about £19 10s.

LITHARGE from British makers is down to £35 per ton, with imported on spot a shade cheaper.

LITHOPONE.—Continental red seal is steady but slow to move at £24 per ton.

OXALIC ACID has been little called for and quoted at 7½d. per lb. ex wharf London.

POTASSIUM BICHROMATE from British makers is unchanged at 7½d. per lb., and spot lots are at about the same figure up to about 8d., with little business passing.

POTASSIUM CARBONATE remains at £25 per ton for 90 to 92 per cent.

POTASSIUM CHLORATE on the spot is a shade weaker at 4½d. to 4¾d. per lb., British makers quoting round about latter spot figure; the market is dull.

POTASSIUM PRUSSIATE is steady at 1s. 1½d. for yellow, and red is nominal. British makers ask 1s. 2d. for yellow and 2s. 6d. for red.



SALTCAKE is nominal, with no inquiry, at £5 to £6 per ton.

SODA ASH (58 per cent. light alkali), for home trade only from British makers, is steady at £8 7s. 6d. per ton; spot parcels are offered, with little demand, and are easy at £10 London and about £9 in the North.

SODA CAUSTIC on the spot is slow to move, and values, although unchanged, are not firm: 70 to 72 per cent., £23 10s.; 76 to 77 per cent., £25 10s. ex wharf, shipping port, drums free. British makers quote to domestic consumers on contract at: 70 to 72 per cent., £22 10s.; 76 to 77 per cent., £24 10s. per ton.

SODA CRYSTALS from British makers, for home trade only, is steady at £6 10s. per ton in bags, carriage paid; spot lots, ex store, £6 5s.

SODIUM BICARBONATE is offering on the spot in small lots at £11 per ton, but is dragging. Makers quote at £11 10s. per ton in bags.

SODIUM BICHROMATE from British makers is steady at 5½d. per lb. Spot lots are also at same figure, with very little demand.

SODIUM CHLORATE from British makers is unchanged at 3½d. per lb. Some spot lots down to about 3¼d. on a quiet market.

SODIUM HYPOSULPHITE.—The position is as last reported. Spot parcels of pea crystals in 1-cwt. kegs are offered at about £19 10s. per ton, and commercial quality at about £14. Business is very light. British makers quote unchanged at: photographic, £18, and commercial, for home trade only, at £12 10s. per ton.

SODIUM NITRITE is down on the week, and now quoted at about £31 per ton for 100 per cent.

SODIUM PRUSSIAN on the spot is firmly held and in very small supply at 9½d. per lb. British makers' price is also at this figure.

SODIUM SULPHIDE from makers is unaltered at £22 per ton for 60 to 65 per cent. concentrated in casks. Spot lots of 60 to 62 per cent. solid in drums is dearer at about £23, with broken in drums at £24 per ton.

ZINC OXIDE.—British makers quote white seal at £41 10s., green seal £40, and red seal £37 per ton, f.o.r. works.

COAL-TAR PRODUCTS, ETC.—PITCH remains the strong feature of this market. Business in other items has been slow, and values, although quoted at same level as last week, are not at all steady. ANILINE OIL is cheaper at about 1s. per lb., drums free, but remains an idle market. ANILINE SALT is unaltered on a slow market at 1s. 1d. per lb., casks free. DISINFECTANTS are nominally at 3s. 9d. per gallon in drums, but there is little or no demand. NAPHTHALENE continues sluggish, and prices are maintained with difficulty, being the same as last week for all grades. PITCH holds very firm at 70s. per ton f.o.b. London, and is in fair demand. TOLUOL is unchanged, but is seldom asked for; pure, 3s. 2d.; commercial, 2s. 9d. per gallon, in drums. XYLOL is dull and weak at: pure, 4s.; commercial, 3s. per gallon, in drums. SULPHATE OF AMMONIA from the Federation: 25½ per cent. ammonia, February delivery, £16 13s.; 25¼ per cent. ammonia, £15 10s. per ton delivered for home trade only. Pure METHYL ALCOHOL is steady but dull at £80 per ton ex wharf London. CRESYLIC ACID is unchanged on a dull market. Crude, 1s. 10d.; dark, 9s. per cent., 2s. 3d.; pale straw, 97 per cent., 2s. 6d. per gallon, drums extra. PYRIDINE is steady but quiet at 5s. 6d. per gallon f.o.r. works. REFINED TAR remains quoted at 7½d. per gallon naked at makers' works.

#### Fixed Oils, etc.

THE brisker business reported last week has not been fully maintained, and a number of products are now quiet, with values on the decline. Linseed oil has passed its recent boom and is now dropping back. Turpentine is dull and easier. CASTOR OIL.—Hull mills' prices are unchanged and seem quite firm, although the market continues slow: pharmaceutical, 55s.; first pressings, 50s.; second pressings, 45s. French medicinal water-white is quoted at 61s. per cwt. in barrels, 62s. in drums, and 64s. in tins and cases ex wharf London. COCONUT OIL has been maintained steadily, with deodorised unaltered at 50s., Ceylon a shade easier at 45s., and Cochín at 48s.

ACID OILS.—This market has advanced and spot supplies are very scarce. Coconut, 35s. 9d.; palm kernel, 35s. 9d.; groundnut, 33s. 6d. Pale qualities are extremely scarce, some grades being unobtainable. COTTONSEED OIL.—At lower figures the market is this week steadier: deodorised, 46s. 6d.; common edible, 44s.; soap-making, 42s.; crude, 37s. 6d. GROUNDNUT OIL has been quieter and slightly easier; offers of deodorised at 55s. are being made, while crude Oriental c.i.f. for shipment is much cheaper at 44s. 6d. LINSEED OIL.—The recent rise, which carried the price of spot delivery to as high as £40 a ton, encountered a good many realisations on the part of speculators, and the market thus reacted a good deal, especially in face of a similar experience in the raw product. The market is rather uncertain at a comparatively high level of prices in both products. The relative scarcity of spot and near-at-hand linseed is having some bearing on the market, which looks like being very irregular for some time yet, or until there is a freer movement of seed supplies from the River Plate. Wheat has been rushed along from that quarter in preference to linseed, due to an excited world's demand. The American demand for linseed oil was recently extremely active, with large orders placed, but the home demand is restricted. PALM-KERNEL OIL.—The market has been slack and current prices are down a point, with a steady tone. Deodorised, 48s.; crude on spot, 40s. 6d. PALM OIL.—At slightly lower figures the market closes steady. Lagos, 39s.; softs, 37s.; hards, 31s. 6d. RAPE OIL.—Values hold up quite well at their present high level. Refined, 58s.; crude on spot, 52s. SOYA-BEAN OIL.—A quiet market, with prices about the same and steady. Deodorised, 46s. 6d.; crude Oriental c.i.f. for shipment, 36s. TURPENTINE (American).—So far this week this market has been almost inactive, and quoted prices are down slightly, on spot, closing at 69s. per cwt.; March to April shipment, 69s. Visible stocks are a little more, being at 19,700 barrels, compared with 39,500 same time last year.

#### Lubricating, Burning, Mineral Oils, etc.

VERY poor business only is recorded in this market for the past week, and values in a number of products have eased off somewhat. Lubricating oils on the spot have been reduced from 25s. to £5 per ton, according to quantities. Generally the market may be said to be flat, with values as quoted on the easy side. BENZOL is quoted at about same figures, but the market is quiet and inclined to weaken: pure, 3s. 3d.; 90's, 2s. 9d. per gallon in drums. BURNING OIL remains unaltered in value on a dull market. Crude No. 3, 8½d.; ditto No. 2, 8d. per gallon, barrels free. FUEL OIL, 905 to 910 gravity, £5 10s.; 950 gravity, £4 per ton, ex tank; values are weak on a dull market. NAPHTHA is weaker at 2s. 4d. per gallon on a slow market. Solvent naphtha, 90 to 160, is unchanged at 2s. 8d., and heavy solvent naphtha, 90 to 190, remains at 2s. 7d. per gallon in drums. PARAFFIN WAX and SCALE have been quiet throughout the week, with values quoted unaltered—2½d. to 4¾d. in bags, according to melting-point; scale, on the spot, is offered at 1½d. and 1½d. forward for 122f. to 124f. PETROLEUM OILS stand firm and unaltered at: American standard white, 1s. 4½d.; water-white, 1s. 5d. PETROLEUM JELLIES.—Values are generally about the same, but the market is both quiet and unsteady. Snow-white, £72 10s.; white, £68; extra pale yellow, £51; amber, £27; red vet, £23; dark stiff green, £21, ex wharf London, barrels free. SPECIAL OIL for Diesels and motors continues unchanged and steady at 10d. per gallon, barrels free. WHITE OILS.—Lower prices are again quoted, but no improvement in demand is yet noticeable; special No. 1, £43; No. 1, £41; No. 1A half-white, £40, drums free; No. 2 half-white, £34, barrels free, ex wharf London. LUBRICATING OILS.—Considerably lower prices are quoted all round on the spot, and the current prices for cylinders may tend to firm up somewhat, as the shipment prices seem to be going that way. Pales, £13 10s. to £24 10s.; reds, £18 to £30; dark cylinders, £17 to £35 10s.; filtered cylinders, £22 to £40; blacks, £8 to £19, all less 2½ per cent. ex wharf London. SOLUBLE OIL.—Unchanged at £25 10s. easy.





Letters for this section should be written on one side of the paper only. The writer may adopt an assumed name for purposes of publication, but he must in all cases furnish his real name and address to the Editor.

#### Latin Names for Drugs

SIR,—The remarks of "Jay Mack" on Latin names for drugs (*C. & D.*, February 11, p. 69) remind me of a pharmacy I once worked in where two drawers side by side were labelled respectively "Crem. Tart." and "Cret. Gall." with the consequence that one day a youthful apprentice served a lady with some of the latter instead of the former, and she made some cakes, with very sad results. Although the dog Latin of pharmacy may be very poor compared with the Latin of Caesar and Virgil which we struggled with in our youth, the question of nomenclature raises the point as to whether it was not a great mistake to omit Latin from the Preliminary examination, as, at any rate, an apprentice had some groundwork of knowledge to start with and was familiar with the different terminations of declension and case. It is much easier to learn the pharmaceutical names when one has had such a preliminary training.—Yours, etc.,

LATINO (14/2).

SIR,—Referring to "Jay Mack's" remarks (*C. & D.*, February 11, p. 69) on dog-Latin labelling, certainly the official name for cream of tartar is a most unwieldy one, but substitution of English nomenclature in general would, to my mind, be a backward step, the principal reason being the great convenience of contractions. The old-time "cremor tartari" should have been retained, and the perhaps remote though possible likelihood of confusing the poisonous p. pot. antim. tart. with the harmless p. pot. acid. tart. would thereby be prevented. Concerning the labelling of packets of chip boxes, undoubtedly an alteration would be welcome. I remember as an apprentice in the wholesale what a "pons asinorum" the old German willows and the British-made "I.X.L." ones were to me on this account. Yours truly,

H. C. MEYRICK, L.P.S.I., etc.

SIR,—"X-Rayser II." may have the risks of his dog-Latin label for cream of tartar: "safety first" is my motto. Price-list Latin is all right in its way, but a glaring case like pot. tartras acid. should at least have the English name added. Enclosed is a sample of what I do in this case. "X-Rayser II." is forgetting that

98/99%  
**Potass. Tartras Acid. Pulv.**  
**Cream of Tartar**

the job of packing cream of tartar and the like is now done by girls and boys who do not know a word of Latin. Men and women who are qualified detest or refuse to do such work.

Yours truly,

JAY MACK.

#### Insurance Dispensing

SIR,—From the report of the quarterly meeting of the East Anglia Federation (*C. & D.*, January 14, p. 45) it looks as though another unpleasant surprise is to be sprung on panel chemists. A resolution was passed, to be submitted to the Retail Pharmacists' Union, that the Council of that body should press for a retention of the duplicate prescription-forms; is it contemplated, therefore, under the new terms to discontinue duplicates? If so, all local associations will be well advised to oppose this move with every means in their power, as otherwise pharmacists will find that besides an unwarranted reduction in payment, they will be saddled with a very large increase of unremunerative labour. It has always been considered under the National Insurance Acts that the

filing in a proper manner of these duplicates was sufficient for all purposes, and, in fact, it has been one of the arguments for the payment of a low fee that there was not the same amount of work entailed as there would be with ordinary scripts. If, therefore, the duplicates are discontinued it will be a necessity, both to comply with the Pharmacy Act and for the pharmacist's protection in case of reference or loss of the originals, to copy all Insurance scripts into the prescription-book. The amount of extra work involved (with less pay) for a man who is situated in an industrial neighbourhood, and who turns out these scripts by perhaps several thousand a month, can well be imagined; it will doubtless mean the employment of more labour for this purpose alone, and as it is admitted that the service barely pays for itself now, it will become a question to each one of us whether the whole thing will be worth the trouble and expense in which we shall be involved if this step is insisted on.

Yours faithfully,

DUPLICATE (19/9).

SIR,—Your remarks on the Insurance system of pricing prescriptions leads one to wonder what is the difference at the present time between the rates of remuneration for English and Scottish pharmacists. A comparison between the two would be very interesting just now, when we are faced with a reduction in fees. The Scottish pharmacists get a 25-per-cent. margin on their turnover of drugs, whereas we get no profit at all; our dispensing-fees average about 5½d., but I have not, unfortunately, been able to turn up the average fee received in Scotland, although I think I remember having seen a figure of 4½d. given. If this is so, then on the same prescription a pharmacist north of the Tweed would receive nearly 10 per cent. better remuneration than one south of it, which shows what can be obtained by unity of purpose. I must confess that I cannot understand the attitude of the so-called leaders of pharmacy on this question. If anyone suggests that it is time panel pharmacists should combine, either to get decent attention and treatment or to come off the panel in a body, they immediately raise the old bogey of State pharmacies. Where is the Government going to find funds for such a step (the capital sum required would be enormous without the upkeep) when they say there is not enough available to pay our present fees? If the authorities would welcome the withdrawal of the pharmacists from the service in order to introduce State dispensing, why have they not done so in Scotland? It must be remembered that the figure that tells is not the gross profit on the total amount received from the Insurance Committee, but the net profit that is left when all expenses have been accounted for, and it is just this figure which is so difficult to get at in Insurance dispensing. I throw it out as a serious suggestion to some of our advisers who give us these gross figures in hushed tones for fear the Ministry of Health should hear them, and think we are getting rich too quickly, that they should endeavour to ascertain the cost of the service as regards wages, establishment charges, wastage, depreciation, "dispensation," and, having done so, deduct this figure from the dispensing-fees, leaving the amount paid for drugs alone, as, there being no profit on them, their cost does not enter into the transaction (except loss of interest on inert capital). The answer will give the true profit, if any, and I guarantee that it will make the figures quoted in some quarters look very small, as I maintain that the *pro-rata* cost of this service is very different to the rest of our business.

Yours, etc.,

ONCOST (21/1)

SIR,—With reference to the letter on abolishing duplicate scripts (*C. & D.*, February 18, p. 74), I see that the county of Essex has decided to do away with duplicates, and that the actual saving to the Insurance Committee is estimated at £200. If this is the total amount to be saved in a county like Essex, with large congested areas in the suburban part, then it is truly economy run mad. I do not know how many panel pharmacists there are in the county—probably about 200. Assuming this is so, the saving amounts to £1 per head per annum, and it would



be much cheaper for the chemists to pay the amount than to be put to all the expense and labour that they will be at for want of duplicates. The worst feature of the report is that, after economy, the chief reason for the adoption of the plan is because it had already been adopted by Liverpool and Birmingham, and when it is moved in some other county it will be because it has been adopted by Essex, and so on. Taking the country as a whole, at the above rate the total saving will not be more than £10,000, and when we compare this to the £100,000 which the Ministry of Health are spending in salaries to the doctors, whom the Geddes report describes as a luxury, it shows how the panel chemists are mulcted every time. While writing on this, I see that "Xrayser II." questions the Retail Pharmacists' Union's knowledge of the opinion of the trade and their ability to refuse a reduction in fees. I think that the general opinion is that the R.P.U. is bound to make a show of refusing a reduction, but will eventually recommend us to accept it. Even if they did stand out, you cannot guarantee that every pharmacist will come off the panel; there are certain to be some who would not, to say nothing of the multiple concerns.

Yours faithfully,

PANELLITE (18/2).

### The Origin of Influenza

SIR,—There can be no doubt that the term "influenza" has been very loosely used, but I hardly think that "X-Rayser II." (*C. & D.*, February 11, p. 53) is right in saying that the visitations of disease which occurred in the sixteenth century were not the malady which we now call by the Italian equivalent of "Influence." Osler says that "great pandemics have been recognised since the sixteenth century," and goes on to give the dates of four pandemics in the last century, ending with the outbreak in 1889-90, which many of us remember. For twenty-eight years the disease only appeared in small groups of cases, until in 1918 there came an outbreak which far exceeded its predecessors in intensity. Various epidemics have attacked people of different ages, and whereas the 1890 epidemic chiefly carried off old people, the 1918 invasion devoted itself to young adults, and the elderly and very young were spared. It must be realised that influenza is not one disease, but four. Osler describes four types, and every outbreak, however small, shows many examples of them. These types are: (1) Respiratory, in which the bronchial tubes are chiefly affected, but the inflammation may proceed to the lungs, causing pneumonia of a very dangerous variety; (2) nervous, in which there are no catarrhal symptoms at all, and in which headache, pains in the back and joints, and profound prostration are the only manifestations of the infection; (3) a variety simulating cholera, with pains and diarrhoea; and (4) a type which manifests itself by high and persistent fever, and indeed is often indistinguishable from tertian ague.

Yours sincerely,

AN INDIAN PHYSICIAN (12/2).

### Reform Wanted

SIR,—The remarks regarding "Chemists' Dispensing" (*C. & D.*, February 11, p. 54) brought to my mind the fact that a great deal of reform is required in chemists of to-day. They of necessity have to go through a very stringent examination in order to be able to dispense poisons and keep open shop. More care and attention are necessary for the dispensing department and counter trade, and it is very necessary that the doses and percentages of active ingredients should be kept constantly in mind for any emergency. What is a chemist's shop to-day? Nothing, or very little, from an outside show indicates the dispensing or drug department. Everything relating to the prescription, or even a packet of camomiles, is dedicated to the back of the premises; but anything, especially toilet articles, is brought to the front and dealt with apparently with more interest than the legitimate profession. Why is this? The answer appears to me that any Tom, Dick, or Harry who calls offering so much for window space gets the order—and space the chemist should occupy himself if he is worth his salt. A plausible tale and a paltry pittance work wonders with some chemists. This delegating of the legitimate drug

business to drug stores, which are very much on the increase, requires serious thought and attention. Where do you find a chemist's window illustrating with samples the actual drug business, by showing such goods as camomiles, senna leaves, senna pods, gentian root, calumba root, Peruvian bark, glycerin, etc.? Looking at the matter from a doctor's point of view, I feel sure they would be more likely to encourage a pharmacist who caused his premises to look not only from the outside but inside the pharmacy as professional as possible, and not, as now, more like a toilet saloon. I feel pretty certain that before long the State will provide their own dispensaries. If that is to be prevented let the retail chemists look to their laurels, and see that their interest lies more in the dispensing and in dealing in drugs generally. Within the last few weeks I heard expression to the effect that the dispensing of prescriptions is a nuisance. I should not like any prescription for me or mine to be put into the hands of men who feel like that.

Yours faithfully,

ANXIOUS (15/2).

### Morality in Business

SIR,—The idea that morality is one of the commercial virtues is surely amusing in the advanced state we find ourselves in 1922. I do not mean that there is not a certain amount of commercial morality; for example, if a man offers to sell goods at certain prices, discounts, etc., he naturally adheres to his statement, but that is compulsory morality; if he broke his word he would break his business. But when it comes to competition we are in exactly the same stage as we were when we were stained with woad—the man with the biggest club is right. Take the case of big concerns which amalgamate to secure the control of an article; if one or two firms refuse to enter the combine they are promptly undersold until they do agree or are closed up. By reason of the large capital of big multiple shops, they are able to undercut any retailer out of existence—that is business, but it is not morality. With regard to "stunts," they are, of course, only a means of attracting people to one's premises, and they can be equally well worked by an opponent. "Xrayser II." says that he does not see that it is immoral to sell at less than current price if a man does not endanger his stability as a trader. Well, carrying out that idea, the draper over the road could have a fine display of lints and wools, sponges at cost price, as a "stunt," and the grocer could make an advertisement out of cough mixtures, glycerin, and other drugs at less than cost. Equally, of course, there is nothing to prevent "Xrayser II." retaliating by making a feature of a job line of lace curtains or a week's sale of sultanias; but if we extend the principle we shall have every trader in the street selling every other trader's goods as an advertisement at a loss, and eventually be in the happy position of the islanders who lived by taking in each other's washing.

Yours truly,

MORALIST (13/2).

### Psycho-analysis

SIR,—This subject being somewhat to the fore, permit me to offer some observations which have occurred to me: The mind is not a material thing—mind and matter are distinct one from the other. It is better to accept that fact and be content than try to explain it. It is a fact, like many others, quite undeniable, but as to understanding or explaining them, that is another matter. How can we explain the existence of anything? We may know about the properties of many things, but as to the one mystery, the existence of anything, there we stand before a fact indeed, but an insoluble mystery. We are quite able to admit facts—they are undeniable—but we are quite unable to explain them. I think there is nothing to be gained by endeavouring to explain the inexplicable, but I think everything is to be gained by keeping our eyes open to facts—and that is more than most people do, and that is why there is so much misery. Instead of facing facts we seek to escape from them, and plunge into excitement trying to find all sorts of ways to shut our eyes from actualities.

Faithfully yours,

F. C. HERON.



## Subscribers' Symposium

### Dispensing Proprietary Galenicals

"Senex" (C. & D., February 11, p. 69) does well in drawing the attention of proprietors of frequently prescribed "galenicals" to the sometimes inconvenient styles of containers they adopt, and wisely suggests the use of ordinary dispensing flats or plain bottles. The removal of the "original" labels could not, I consider, be more readily done than by simply placing a thoroughly wetted piece of absorbent paper ("filter," "blotting," or soft "tissue") over them, and letting the moisture soak through, while entering in the prescriptions and writing the physicians' direction labels, etc. Except in the case of varnished labels they could by that time be easily detached. This method I have found very expeditious in the case of Insurance dispensing "repeats," etc., with soiled labels, or those of other pharmacies.—H. C. Megrick, L.P.S.I., etc.

## Legal Queries

J. F. (19/2).—It is illegal to employ tinctures upon which spirit rebate has been allowed as a basis for perfumes. The rebate is conditional upon the use of the preparations as medicines.

Limited (9/2).—Full information regarding the registration of limited companies and the law regarding companies carrying on the business of a chemist and druggist will be found in *The Chemist and Druggist Diary*, 1922.

J. S. (14/2).—The "safety" limits of heroin hydrochlor. under the Dangerous Drugs Act are  $\frac{1}{2}$  gr. per oz. or  $\frac{1}{16}$  gr. per dr. If amounts over these are employed the formalities laid down in the Regulations made under the Dangerous Drugs Act must be observed.

Zeno (18/2).—The Shops Act, 1912, states that on at least one weekday in each week a shop assistant shall not be employed about the business of a shop after half-past one o'clock in the afternoon. It is illegal to require an assistant to attend the shop during the evening of the day observed as a half-holiday.

B. S. (20/2).—So long as you do not recommend medicines for the prevention and cure of ailments there is no need for affixing medicine stamps. In *The Chemist and Druggist Diary*, 1921, the subject was fully treated and indications given as to what conditions are, and what are not, regarded as ailments.

D. E. D. (14/2).—If a reference is given on the label of the "Electric Liniment" to a formula in a recognised work of reference you, as a chemist, may sell it unstamped as a "known, admitted, and approved" remedy. You cannot, however, employ a trade-mark solely to the liniment, as that would be claiming proprietary rights.

J. M. (14/2).—There are at present no restrictions upon the sale of chemical thermometers in this country. The Order made under the Defence of the Realm Act has expired, and so far the Ministry of Health has not been able to get the House of Commons to pass a measure limiting the sale to those bearing the stamp of the National Physical Laboratory.

A. E. T. (6/2).—The exemption from medicine-stamp duty referred to on the label of the "Magic Powders" is probably that dealing with entire drugs. You do not tell us the composition of the powders about which you ask for our advice, so that we cannot say whether you are entitled to the exemption. *The Chemist and Druggist Diary*, 1921, contains very full details as to medicine stamp law.

D. C. L. (10/2).—It is not sufficient for the purposes of the Poisons and Pharmacy Act for a limited company to employ a qualified person for the purpose of selling statutory poisons. The name of the qualified chemist must be registered with the Pharmaceutical Society as the superintendent of the company. If the company used the title "chemist," there must be a qualified chemist on the board of directors.

## Miscellaneous Inquiries

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how. We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them.

L. W. (4/1).—There is no difficulty about exporting a proprietary medicine provided that it does not contain drugs covered by the Dangerous Drugs Act. Medicine-stamp duty must be paid, because the sale will take place in this country.

J. F. (1/2).—FOOT-ROT LOTIONS.—The following are good formulas :

I		III	
Cupri sulph.,		Antim. chlor.	3j.
Alum. ... aa.	3j.	Ac. hydrochlor. ...	q.s.
Ac. sulph. ...	3iv.	Aque ...	3x.
Aque ...	Oiss.	The acid is used in a sufficient quantity to prevent precipitation.	

II		IV	
Cupri subacet. ...	3ix.	Cupri sulph.,	
Alum. ...	3vj.	Plumbi subacet. aa.	3iv.
Theriac. ...	3xxiv.	Cupri subacet. ...	3j.
Boil together until the liquid becomes brown.		Aceti ...	Oss.
		Boil together for fifteen minutes, and when cold add ol. tereb. 3vj.	

T. H. W. (25/1).—(1) BOOKS ON HOMŒOPATHY.—We are indebted to Mr. W. H. Lenton, Hunstanton, for the following list of books on this subject which he has found useful: 1. Dr. Hughes, "A Manual of Pharmacodynamics," 25s. 2. Dr. Nash, "Leaders in Homœopathic Therapeutics," 15s. 6d. 3. Dr. Dewey, "Practical Homœopathic Therapeutics," 15s. 6d. 4. Dr. Clarke, "The Prescriber," 6s. 6d. 5. Dr. Hughes, "Principles and Practice of Homœopathy," 20s. 6. Dr. Ruddock, "Text-Book of Medicine and Surgery on Homœopathic Principles," 21s. 7. Laurie's "Guide," 2s. 6d. 8. Ruddock's "Stepping Stones," 2s. 6d. 9. British Homœopathic Pharmacopœia, 10s. 6d. 10. Ashwell's "Companion to the British and American Homœopathic Pharmacopœias," O/P. 11. Dr. Fallon, "A Biochemic Primer," 2s. 6d. (2) BOOK ON DIETETICS.—A modern guide to the subject is Dr. Hamill's "Diet in Relation to Normal Nutrition" (Stationery Office, 3d.). This is one of the Ministry of Health pamphlets. A more ambitious work is Hutchison's "Food and the Principles of Dietetics" (Arnold, 21s.).

## Retrospect of Fifty Years Ago

Reprinted from "The Chemist and Druggist," February 15, 1872

### The Pharmaceutical Preliminary Examination

Mr. Joseph Ince concludes a paper on the Pharmaceutical Preliminary examination as follows:

"Let us talk together for a moment: sit down, and listen to what I say. Do you really think that this Preliminary examination is difficult? Does it contain anything that anybody should not know, whether engaged in pharmacy or otherwise? Would you not rather be the friend and companion—the intimate associate of the host amongst ourselves of cultivated intelligence, rather than grow up to be a petty tradesman, and whine about a status? The way to obtain a status is to have one. No living man can treat other than as an equal one who knows Latin, arithmetic, and English literature. Never forget the splendid historical anecdote. When the Pope was somewhat dilatory in crowning Napoleon, that exemplary individual crowned himself. Go and do likewise. I ask you in my own name, and in that of our Society; I ask you in the name of the men who constitute the British Pharmaceutical Conference, to enter the charmed circle of the intellectual life. This I promise, that you will find it a spring of perpetual pleasure, and abundant, never-ending source of contentment. It will throw round you the halo of its quiet happiness, whatever you may think or do. It will gild your darkest cloud and lighten your heaviest sorrow. Years hence, when you have grown grey in its blessedness and enjoyment, you will not regret that this journal left its usual track in order to say something about the Preliminary examination."



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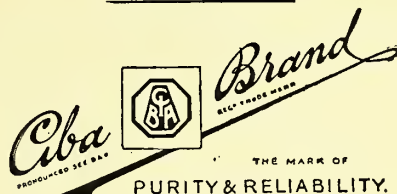
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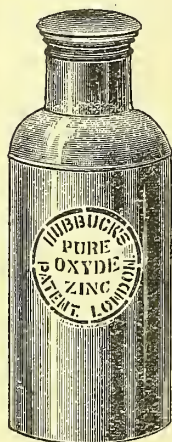
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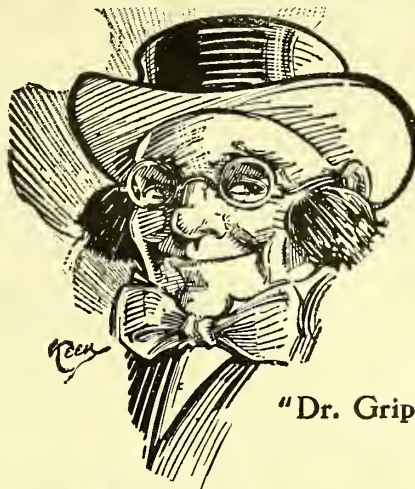
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DEAR SIRs,—For many years I have watched the introduction of headache specifics and subjected them to both analytical and clinical tests, but have never felt inclined to approve of their composition or effects. I must admit, however, that your new formula for the "Daisy" Headache Cure merits my complete approval, and I am especially pleased to note that you have replaced the depressing ingredient, acetanilid, by an infinitely safer and more certain principle, free from any possibility of causing injury to the system. I lay great stress both on its efficiency and safety, and am constrained to compliment you on your commercial courage in placing an unusually costly formula, at a reasonable charge, at the command of the public.

Yours faithfully, (Signed) ROBERTSON WALLACE.

**TERMS :**

1/- Packets each containing 8 powders—Minimum Retail Price, 1/- ; Sample Powder 2d.  
For not less than 1 doz. Boxes, 9/9 per doz. For not less than 3 doz. Boxes, 9/2 per doz.  
2/3 Packets each containing 20 powders—Minimum Retail Price, 2/3.  
For not less than 1 doz. Boxes, 21/6 per doz. For not less than 3 doz. Boxes, 20/6 per doz.  
Mixed Orders for 1/-, 2/3, 6/- size and for Daisy Tablets on best terms.  
Discount 7½ per cent. for cash. Carriage Paid to destination. From all Wholesalers or direct.

**DAISY, LTD. MANUFACTURING LEEDS.**  
—CHEMISTS—

TELEGRAMS : "Daisy Leeds."

TELEPHONE : 22042.

# Special New Year Offer.

## Woodward's "Gripe Water"

### Window Display Terms to Retail Pharmacists.

From the 1st January, W. WOODWARD (1920) LTD., will, in respect of the first gross of any order from a Pharmacist for "Gripe Water," send 13 doz. bottles for the price of 12 doz. viz., £7 NETT, carriage paid in free case, with

### AN ATTRACTIVE SET OUT FOR A WINDOW DISPLAY

This Display shall be in a central position of the window and for not less than two weeks. This offer will be renewed during 1922 with **EVERY ALTERNATE GROSS** ordered by the Pharmacist.

Pharmacists willing to give the Display should mark their orders "on Window Display Terms" and sign the form of contract-note which will be sent them on receipt of their orders.

Such orders may be placed with the Pharmacist's usual Wholesaler or direct with us.

These special terms will hold good throughout the year 1922.

**W. WOODWARD (1920) LTD.,**  
**79/87, FORTRESS ROAD, LONDON, N.W. 5.**

*Pharmacists will please note that Woodward's Fixed Terms for Great Britain from 1st January, 1922, are:—*

**£7 NETT PER GROSS, CARRIAGE PAID, AND CASES FREE.**

*In Ireland applications for Window Display must be made direct to our Agents:—*

**Messrs. JOHNSON BROTHERS of Ireland.**



# QUALITY PREDOMINATES

WITH the help of our advertising you have to sell these products the first time only. The second and each successive sale is assured by the quality of the goods themselves. Never be out of stock of these quick-selling, rapidly moving lines. Recommend them with confidence and remember—*every sale means a pleased and satisfied customer.*

## REUDEL BATH SALTRATES AND ALKIA SALTRATES

THE BATH PREPARATION PAR EXCELLENCE, cures Corns and all Foot Troubles permanently, stops Rheumatic or other aches and pains within ten minutes.

Sells at 2/- and 3/3 (P.A.T.A.)

The acme of perfection in Salines. Unrivalled for Liver, Kidney, Stomach, Blood and Intestinal Disorders.

Sells at 3/3 a large bottle (P.A.T.A.)

These products simply will not stay on the shelf.

## SOME TRULY REMARKABLE TESTIMONY FROM CHEMISTS

READ THESE LETTERS IN SEQUENCE:

**CHARLES ROBERTSON**  
CHEMIST AND  
PHOTOGRAPHIC DEALER.  
115, Market Street, ST. ANDREWS.  
Telephone Shop No 175. Mobile No 176. Street Bell

Feb. 9th 1919.

Messrs. Saltrates Ltd.,  
Euston Buildings,  
London. N.W.1.

Dear Sirs,

Please send enclosed order carriage paid.

Raudel is very restless. I have difficulty in keeping it on the shelf.

This may interest you:- At the same time I received an order for Reudel by post yesterday, I had a customer at my counter calling for a second packet. A few moments after, another customer called for 3/3 Alkia.

In less than a quarter of an hour I had realised 3/1 profit, from your advertising. Very interesting, that, isn't it? I am always interested in results from advertising, being a keen believer in printers ink.

Yours very truly,  
*Charles Robertson*

**W. CORNISH, M.P.S.**  
THE PEOPLE'S CHEMIST  
The Oxford Pharmacy 188 Lower Ashley Rd.  
BRISTOL  
April 24th 1920

Messrs. Saltrates Ltd.  
Euston Buildings,  
London. N.W.1.

Dear Sir:- I was reading through reproduction of Mr Robertson's (St Andrews) letter on page twelve of to-day's date Chemist & Druggist and I think this afternoon I surpassed his feat, in my shop as above. Four customers following, purchasing Saltrates preparations as follows.

2/- Raudel Bath Saltrates	All in
3/3 Alkia Saltrates	five
2/- Raudel Bath Saltrates	minutes
3/3	or so.

Later on in the day I was asked for another 2/- size Raudel, but in this case the customer would not take the 3/3 size, so I missed the sale, having just sold the last small package. I am quite prepared to admit that this is a coincidence that does not often occur, and probably was in part due to other brother Pharmacists being "Sold out" But your preparations are always good sellers with me.

I thought the foregoing would interest you, and it is absolutely authentic, as my Lady Assistant can witness. If the "Tale" wants adorning, and I say "point a moral", I would say never load up your shelves with goods that stick there, but to borrow Mr Robertson's "Natty phrase fill up with 'restless' goods which are restless to the point of removal for 'Cash Till Food'.

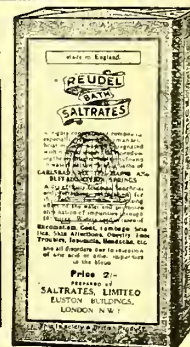
With compliments,  
Yours faithfully *W. Cornish*

Note.—The above statements were sent to us without solicitation of any kind.



YOU can stock these goods on Guaranteed Sale Terms. Carriage Paid in United Kingdom on orders for 3 dozen and over, which may be assorted. Special Terms for Window and Counter Display.

**SALTRATES LIMITED**  
Euston Buildings, LONDON, N.W. 1.



# Gelatines

Fine Leaf Gelatine, Pure Calf.

**"Albion" Brand** (In 1-lb. Packets,  
112 x 1-lb. to Case)

Made in England.

FINE CRYSTAL GELATINES.  
PURE SKIN GELATINES.  
POWDERED GELATINES.

Samples on Application.

**OURY, MILLAR & CO.** 9 MINCING LANE,  
LONDON, E.C. 3.

Telegrams: "Olmenth London."

Telephone: Avenue 4978.



THE GREAT NERVE FOOD AND FLESH BUILDER.

A LARGE advertising campaign is now in progress in connection with this popular tonic and flesh-building treatment, and the demand is rapidly increasing.

IRVONA is obtainable from all the usual wholesale houses, or direct, at the following prices—3/- size, 27/- per dozen.

15/- " 135/- " "

Another line rapidly growing in popularity—

"IRVOLAX" (the safe aperient).

1/3 size ... .. 12/- per doz.  
3/- " (four times the quantity) 27/- "

Terms Nett 30 days, subject to usual trade references.  
Under 27/- cash with order.

IRVONA is on the P.A.T.A. list and gives you a clear profit of 25% on turnover.

Pamphlets for distribution and Show-cards will be sent on application.

**P. J. WILLIAMS**

Chiswell Chambers, 27 Finsbury Street,  
LONDON - - E.C. 2

**Dr. DE JONGH'S**

LIGHT BROWN

**COD LIVER OIL**

IN IMPERIAL HALF-PINTS, 4/-

**ANSAR, HARFORD & CO., LTD.**

182 Gray's Inn Road - - LONDON

SOLE CONSIGNEES.

**VITMAR**

*The new vitalising food  
proved to contain the  
three principal vitamins*

YOUR WHOLESALEERS CAN SUPPLY YOU.

Manufacturers:

Food Specialists,

**CALLARD & CO.,** 74 Regent St., LONDON, W. 1.



# VITAFER

## in Youth, Manhood & Age.

*The value and utility of Vitafer as a Tonic Food, under any and all circumstances, is well illustrated by the following letters.*

### FROM A CLERGYMAN :

"I gave Vitafer regularly to a grandson, aged 12. He came here six months ago a perfect wreck, unable to sleep, constant headache, unable to concentrate his mind, and generally run down.

"After taking Vitafer for three weeks he improved in weight, had a healthy appearance, and a return of physical energy. He is now fat and rosy, and able to do lessons like other children—the change is wonderful."

### FROM AN OFFICER

of the Army of Occupation, in the prime of life, suffering from physical and mental overstrain.

"Vitafer seems a most remarkable preparation from the effects produced by even the small quantity already taken. I feel sure it is exactly what I needed to counteract the inevitable *post-bellum* reaction."

### FROM A M.R.C.S. :

"I think your Vitafer a very good preparation indeed. I have given some to an old lady, aged 89, and she has derived considerable benefit from it. In fact, she was so debilitated after Bronchitis and Dyspnoea that everyone thought she would die, but now I think she is going to remain with us for some time longer."

THESE LETTERS ARE BUT TYPICAL OF THE VOLUNTARY  
TESTIMONY WHICH IS CONSTANTLY REACHING US FROM  
MANY DIFFERENT SOURCES.

We invite Pharmacists to co-operate with us by bringing Vitafer forward in their Pharmacies, either in the Window or on the Counter. SHOW CARDS, COUNTER STANDS, and all necessary material sent free of charge.

DETAILS OF WINDOW SHOW PARCELS (£5 and £10),  
SHOWING PROFIT OF 76% ON CAPITAL OUTLAY, OR  
43% ON SALES, ON APPLICATION.

**SOUTHALL BROS. & BARCLAY, Ltd.**  
**BIRMINGHAM.**



# Maltoline

TRADE MARK

For those unable to take Cod Liver Oil  
Prices 3/- and 5/6 (P.A.T.A.)

**THE MALTINE MFG. CO., LTD.**  
9 HOLBORN VIADUCT, LONDON, E.C. 1.

## WINGARNIS

**Sells readily ALL the time**

COLEMAN & CO., Wincarnis Works, NORWICH.

### IMPORTANT NOTE TO CHEMISTS WITHOUT LICENCES

It has been established  
by law that Registered  
Chemists may sell  
"Wincarnis with  
Quinine" *without* a  
licence.

D<sup>r</sup> HALE'S  
**VIN-SANGUIS**  
WINE FOR THE BLOOD

### Fountain of Health

If you have a  
Wine License we  
will pay the fee.

If not, get one,  
we will pay  
license.

Send for any



You agree to display  
"Vin Sanguis" always  
You give us an  
agreed initial order.  
You always keep stock

for further particulars

PROPRIETORS OF  
DR. HALE'S VIN-SANGUIS

**Transcontinental Agencies Ltd**  
14, Southampton St., London, W.C. 2

## Vinum Xericum

BUTTS. HOGSHEADS. QR. CASKS.  
108 galls. 54 galls. 27 galls.

Grade A. STRENGTH 16.5°-17° Abs. Alc.

Grade B. " 18°-19° Abs. Alc.

**James V. Oldham**

19 St. Dunstan's Hill, London, E.C. 3.

Telephone : Avenue 3013.

### In Daily Demand for CONSTIPATION.

A prominent physician writes :—"Osmos" has worked wonders with a patient suffering from Chronic Constipation." Make a point of putting "Osmos" in the window now and then. It will pay you well.

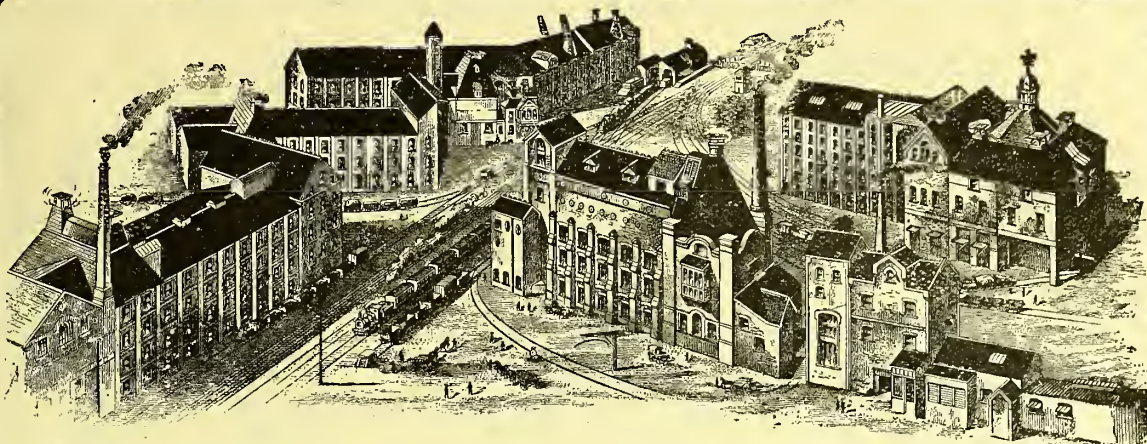
# Osmos

The Great British  
Aperient Water

Trade Terms ... 22/- per dozen bottles, carriage paid.  
Retail ... 2/6 per bottle (P.A.T.A.)

Osmos, Crown Wharf, Hayes, Middlesex. (1)





**SPECIALIZING.**—The above Maltings, Malt Extract Manufactories and Laboratory of H. A. & D. TAYLOR, Ltd., and the BRITISH DIAMALT CO., SAWBRIDGEWORTH, specialize in the manufacture of high-class Malt Extract Products. The leading Manufacturers of Malt Extract with Cod Liver Oil. Packed in Jars, Tins, etc., to meet clients' requirements.

*Prices, Specimen Labels, Showcards, etc., on request.*

**H. A. & D. TAYLOR LTD.,** PROPRIETORS  
OF  
**THE BRITISH DIAMALT COMPANY,**

CITY OFFICE: 9 HOLBORN VIADUCT, LONDON, E.C. 1.  
Phone: City 1765. Telegrams: "Nutrimalt, Cent, London."

LIVERPOOL OFFICE: ARCADE BUILDINGS, 9 LORD STREET.  
Phone: Bank 3489.

LABORATORY AND WORKS: SAWBRIDGEWORTH, HERTFORDSHIRE.

Also at BURY ST. EDMUNDS, BISHOP'S STORTFORD, NEWMARKET, etc

THERE IS A STEADILY GROWING DEMAND FOR

**Fry's Malted Cocoa**

CONSTANTLY RECOMMENDED BY THE MEDICAL PROFESSION & PRESS

BRITISH MADE  
BRITISH OWNED.

SLACK & BROWNLOW,  
Town Mills, Tonbridge, Kent.

**"Brownlow" Filter**  
FILTRATION THROUGH CYLINDERS OF KIESELGUHR

Crystal Pure Water.  
Free from Disease Germs.



AGENTS WANTED EVERYWHERE.  
Catalogue on Application.



The **W** Brand of Hand-Moulded

**BOTTLES**

AND

**MEDICAL  
GLASSWARE**

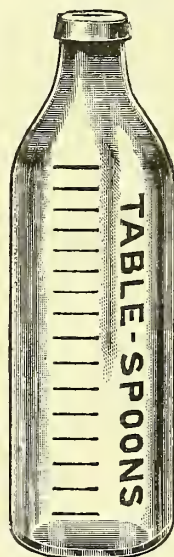
*Free from dangerous "frosted glass."*

.....

*Finest Quality Dispensing Bottles,  
Poisons, Cheltenham, Chest Squares,  
Shop Rounds, and Bottles for  
Proprietary articles, in various colours.  
Feeding Bottles and Sterilizing Milk  
Bottles in Heat-Resistant Glass.*

.....

*Wholesale only—*



STERILIZING  
MILK BOTTLE.



DISPENSING  
BOTTLE.

**WOOD BROS. GLASS CO. LIMITED,**  
(Established 1828). **BARNSELY, ENGLAND.**

## GLASS BOTTLES.

We have the following bottles IN STOCK  
and are prepared to clear at very cut prices:

Gross			
70	2-dram.	White Flint Vials	
300	$\frac{1}{2}$ -oz.	"	"
300	1-oz.	"	"
50	$1\frac{1}{2}$ -oz.	"	"
350	2-oz.	"	"
70	2-oz.	"	Limes
20	3-oz.	"	"
50	6-oz.	"	"
60	8-oz.	"	"
100	10-oz.	"	"
50	12-oz.	"	"
100	8-oz.	"	Kalis
100	10-oz.	"	"
50	12-oz.	"	"
50	20-oz.	"	"
50	2-oz.	"	Medical Flats, Plain
150	3-oz.	"	"
50	4-oz.	"	"
50	8-oz.	"	"
50	2-oz.	"	Mexican Flats
50	3-oz.	"	"
50	4-oz.	"	"
20	8-oz.	Blue Hexagon Poisons	
20	4-oz.	"	

**TOM LAYCOCK & Co.**  
Cabinet Chambers, Basinghall Street, LEEDS.

## Pyramid Policy

THE making of fine Corks is not a secret process—although there are wrinkles. And experience makes a difference! There is one thing that *does* count. It is this.

## PYRAMID CORKS

are better corks because of the Pyramid Policy. We could make cheaper corks and get the same price—but it's not honest. And honesty is the Pyramid Policy. 100% value for money—nothing less—that is what has built this business.

*Write for Pyramid Prices and Samples to-day.*

**N. W. Mitchell & Sons, Ltd.,**

"The Cork Firm."

**Limehouse, London, E. 14.**





---

# 5% Bovril Bonus

**THE  
PRESENT  
SCHEME  
CLOSES  
28th  
FEBRUARY**

The Bonus Scheme  
will be repeated from  
March 1, 1922.

*For full particulars of trade terms apply to:  
Bovril, Ltd., 148-166, Old St., London, E.C.*

# BOVRIL

---

We invite your enquiries  
for—

# OILS

including

**MINERAL & LUBRICATING  
OILS OF ALL KINDS.**

**ARACHIS NUT OIL**

**CASTOR OIL**

**COTTON OIL**

**COD LIVER OIL**

**COLZA OIL**

**LINSEED OIL**

**NEATSFOOT OIL**

**OLIVE OIL**

**PARAFFIN LIQUIDUM**

**PETROLEUM JELLY**

**ROSIN**

**SPERM OIL**

**SOYA BEAN OIL**

**TURPENTINE**

**WHITE OILS**

**FINEST B.P.**

**CONTINENTAL & ENGLISH B.P.  
TECHNICAL**

**EDIBLE REFINED.**

**FINEST NORWEGIAN NON-  
FREEZING.**

**GENUINE CATTLE QUALITY.**

**GENUINE & BURNING  
QUALITIES.**

**GENUINE BOILED, PALE-  
BOILED & RAW.**

**FINEST ACIDLESS.**

**EDIBLE & PHARMACEUTICAL  
B.P. INDUSTRIAL.**

**'880 & '870 B.P.**

**WHITE & YELLOW B.P.  
TECHNICAL RED & GREEN.**

**ALL GRADES, FRENCH &  
AMERICAN.**

**FINEST PALE COLOURED.**

**FINEST EDIBLE.**

**GENUINE AMERICAN SPIRITS  
AND SUBSTITUTES.**

**TECHNICAL QUALITIES.**

**JAMES ARNOTT & SONS, LTD.,**

Head Office: 47 PILGRIM STREET, NEWCASTLE-ON-TYNE.

## DOWELL'S PATENT HEALTH PIPES.

**SELF-CLEANER.**

When the Mouthpiece is removed all foulness  
is automatically cleared.



Assorted Shapes and Sizes to sell at 3/6 each.

Send postcard for sample dozen.

**HARWOOD BROTHERS**

Est. 1898. Manufacturers of Briar Pipes and Smokers' Articles.  
8/20 Richmond Street, LIVERPOOL.

For Status Inquiries, Collection of Accounts, and Investigations,  
Business Transfers, Stocktaking and Valuations,

**Join The Association of  
Manufacturing Chemists, Ltd.**

which is **THE MEDIUM** for the **TRADE**

**PROSPECTUS ON APPLICATION.**

**PARKIN S BOOTH,**

Accountant to the Association of Manufacturing Chemists, Ltd.  
(for the Protection of the Drug, Chemical and Allied Trades)

26/28 KIMBERLEY HOUSE, HOLBORN VIADUCT, E.C.

Telephone: City 6942.

Or 35, 36 & 37 EXCHANGE CHAMBERS.

2 BIXTETH ST., LIVERPOOL. Telephone: Central 4330 (4 lines).

**TUCKER & CROSS**

15 ST. MARY AXE,  
LONDON, E.C. 3.

Telephone—AVENUE 2569.

Telegrams—

"GLUCOSE, STOCK, LONDON."

**FRENCH CASTOR OIL** WE SPECIALISE IN  
**WATER WHITE**  
**LUCCA OLIVE OIL** PHARMACEUTICAL  
"C. S." BRAND  
**TAMARINDS** WEST INDIAN

STOCKS IN LONDON.

SAMPLES AND PRICES ON REQUEST.

Barrels 3½ cwt.  
Tins and Cases of  
40 kilos.

Cases 50 kilos ea.  
5 & 10 kilo. tins

Barrels 1½ and 2½  
cwt. each.

**Alcohol for Industrial Purposes**  
**Duty-Free Spirit.**

*The Industrial Spirit Supply Company, Limited.*

Agents: HONEYWILL BROS., 79 MARK LANE, LONDON, E.C.3.



# Francis F. Fox & Co.: Bristol

**LINSEED OIL.      TURPENTINE.**  
**FINE OLIVE OILS.**  
**LIQUID PARAFFIN.    CASTOR OIL.**  
**CHEMICALS.      DRYSALTERY.**  
**PETROLEUM JELLY.**  
**CRUSHED LINSEED.**

*PRICES ON APPLICATION.*

TELEGRAMS—  
"FOX BRISTOL."

TELEPHONE—  
19 BRISTOL

**JONES'**  
**Non-Curling**  
**Gummed**  
**PAPER**  
*Serves you Right*

## Pure Castor Oils

PHARMACEUTICAL  
TECHNICAL

Enquiries solicited for all Grades of Oil.

*Langley-Smith & Co.*  
14/20 St. Mary Axe, London, E.C. 3.

Telegrams: "Tallowdom London,"  
Telephone: - Avenue 3820.

# The Sensation of the Chemists' Trade for 1922.

HERE is a new, original and exclusive line, bringing fresh business and liberal profits—the Polar Cub Vibrator.

Electric Vibratory Massage is recognised by the Medical Profession as one of the most powerful aids to health. It dislodges secretions of uric acid, drives poisons out of the system, and gives strength to the muscles and internal organs. It improves the skin, tones up the circulation and complexion.

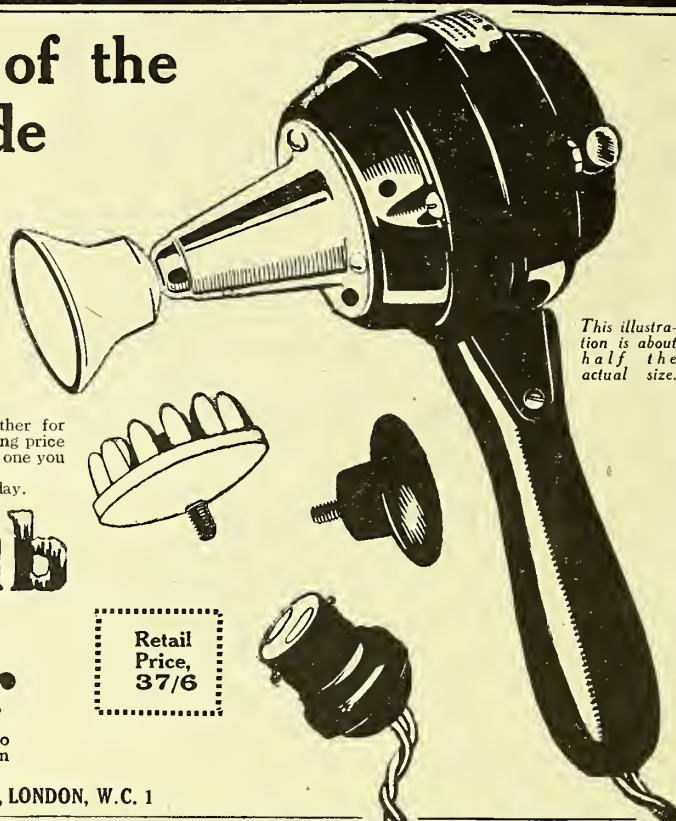
You can sell and recommend the Polar Cub either for Health or for Beauty Culture. The Retailers' selling price is 37/6, affording you a handsome profit on every one you sell.

Write for full particulars and trade terms to-day.

## Polar Cub Electric Vibrator

A supply of attractive advertising matter to help you sell Polar Cub Vibrators is sent on receipt of every order.

The A. C. Gilbert Company, 125 High Holborn, LONDON, W.C. 1



This illustration is about half the actual size.

Retail  
Price,  
37/6

# GETS-IT

(The World-Famous Corn Remover.)

"Gets-It" is a liquid which dries at once when applied to corns or calluses with the glass applicator that accompanies each bottle. Stops pain at once and soon loosens the corn or callus so that it can be lifted right off.

Used by Many Millions throughout the balance of the world, and certain of enthusiastic reception here.

Now Distributed in Great Britain through

**THOMAS CHRISTY & CO.**

4, 10 & 12 Old Swan Lane, Upper Thames St., London, E.C.4.

Manufactured by E. LAWRENCE & CO., Chicago, U.S.A.

## BUY DIRECT

## ELARCO RUBBER GOODS

The LONDON RUBBER CO. 183 Aldersgate Street, LONDON, E.C.1.

For GUARANTEED

## ATOMIZERS and SPRAYS

THE DEVILBISS CO., LIMITED  
WEST DRAYTON, MIDDLESEX.



## WM. WARNE & CO. LTD.

29 GRESHAM STREET, E.C. 2.

India Rubber Manufacturers,

Surgical, Chemical, Domestic Articles, Syringes, Water Beds, etc.



# TINS

The NORTH LONDON TINWARE Co., Ltd.

Cronall Street, Hoxton, LONDON, N.1

Manufacturers of

TIN BOXES and CANISTERS FOR INFANTS' FOOD, PETROLEUM JELLY, AND OTHER ARTICLES.

Round and Square TIN BOTTLES, PLASTER CASES, &c.

Cardboard Boxes and Composite Containers.

Telephone : 2466 Central.





# The "MARYLEBONE"

## STERILIZED

# ACCOUCHEMENT OUTFITS.

These Outfits contain sufficient dressings, etc., for the accouchement.

THE "MARYLEBONE" OUTFITS are always "GOOD STOCK" as the contents cannot deteriorate or become soiled, and sterility is maintained.

### Retail Prices :

No. 1 Outfit

**31/6**

No. 2 Outfit

**63/-**

*Trade Terms and descriptive literature on application.*

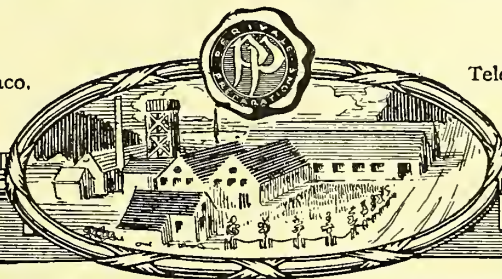
IT WILL PAY the Pharmacist to hold stocks of these outfits. A large demand is being created by means of an intensive Press campaign.

## JOHN BELL & CROYDEN, Ltd.

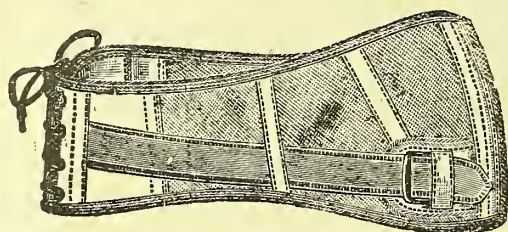
50 Wigmore Street, LONDON, W. 1.

Telegrams : "Croybelaco.  
Wesdo, London."

Telephone: Mayfair 5015  
(4 lines.)

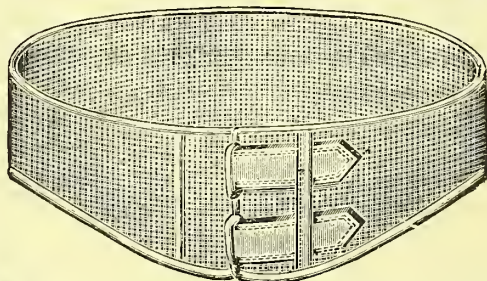






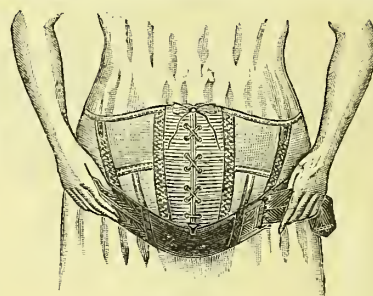
## SURCO SPECIALITIES

Ladies' Belts, Gent's Belts,  
Suspenders, Braces, Trusses, etc.  
*Specials to Measure promptly dispatched.*

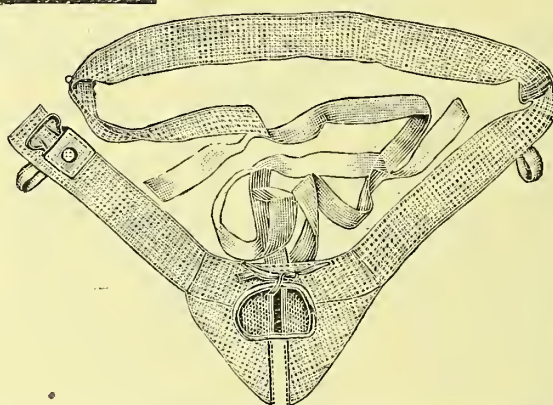


SURCO for Summer Wear.

THE  
**SURGICAL  
HOSIERY**  
Co. - - Ltd.  
Russell Street,  
NOTTINGHAM.



MINERVA.



AERTEX for Summer Wear.

[2]

## YOUR BEST HOUSE FOR

Air Cushions, Bathing Caps, Bed Sheetings,  
Douches, Enemas, Hot Water Bottles  
and Covers, Pessaries, Soothers, Sponge  
Bags, Sponges (Rubber), Spray Bellows,  
Syringes, Teats, Tubings, Whirling Sprays  
and Surgical Rubber Goods of all kinds, etc.,

IS

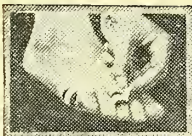
**JAMES TOMPKINS LTD.,**

THE RUBBER HOUSE,

386 CITY ROAD - - LONDON, E.C. 1.

ESTABLISHED 45 YEARS.

Phone: Clerkenwell 3774.



### Dr. SCHOLL'S FIXO CORN PLASTERS.

A medicinal plaster for the treatment of  
hard corns. Removes the most painful  
corn in 48 hours. Easy to apply, sure to stay.  
Retail 9d. for four, 1/3 for Eight Treatments.

## Dr. Scholl's Foot Comfort Appliances

for which there is a universal demand will increase your profits  
and custom. "Scholl" Appliances are medically endorsed and  
nationally advertised. Feature them in your window-dressings.

Write to-day for full particulars.

The SCHOLL MFG. CO., Ltd., 1-4 Giltspur St., LONDON, E.C. 1.

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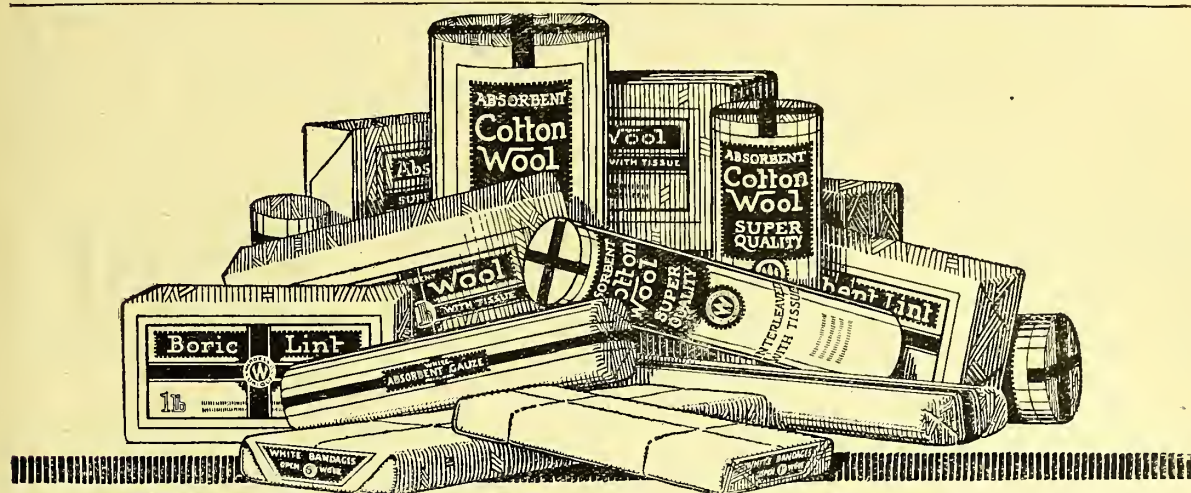
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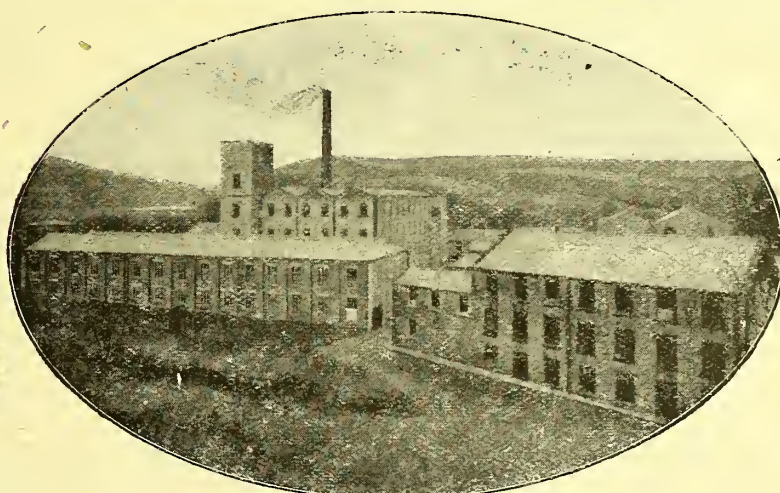
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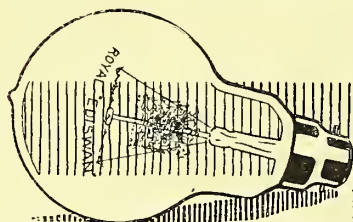
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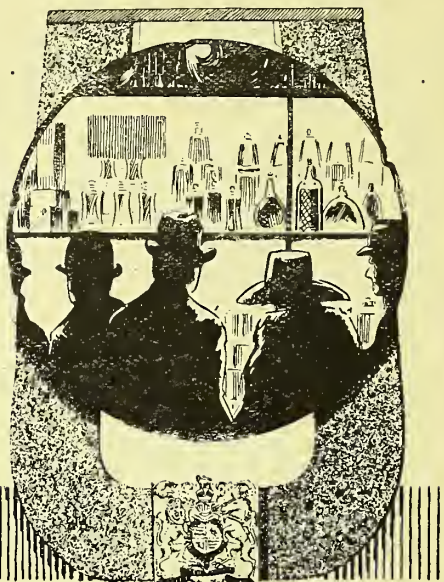
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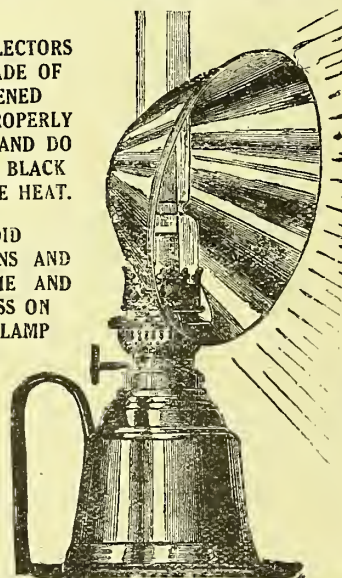
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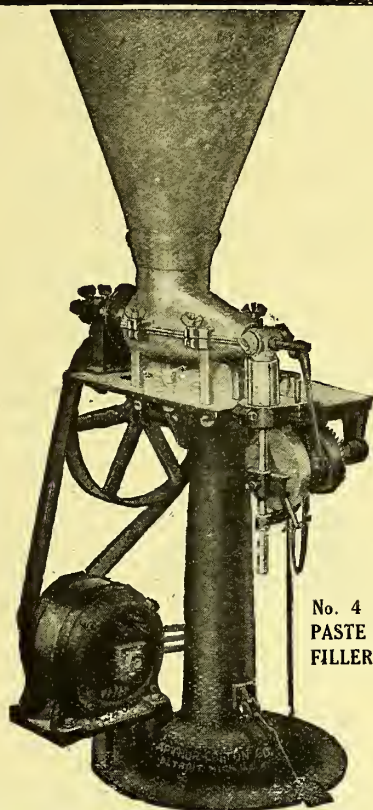
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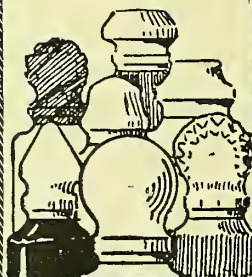
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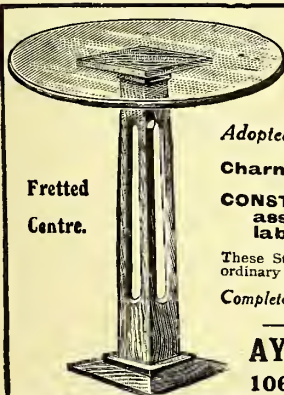
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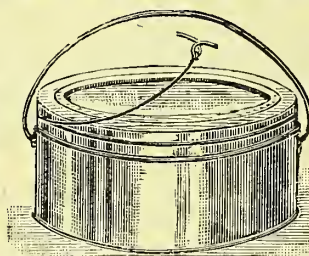
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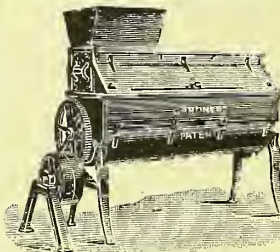
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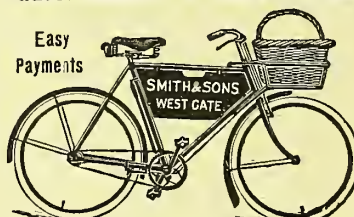
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Fee (British Isles) £1-1-0.

For Qualifying, Preliminary and  
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Individual subjects may be taken.

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fessional and business books for pharmacists, and a copy of

### "THE SPATULA"

an illustrated monthly magazine for druggists, full of  
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THE SPATULA PUBLISHING CO.  
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## "RODINE" BENEFITS

Mr. Burton, Chemist, Devizes, writes: "'Rodine' benefits all concerned except the rats, and I shall do my best to push it. My experience has proved that 'Rodine' is a good thing, a good seller and yields good profits."

### Local Advertisement Increases Sales

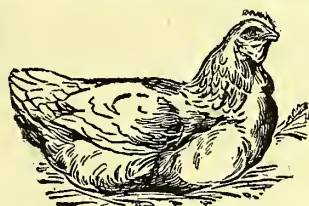
Mr. A. Ashfield, Chemist, Shanklin, Isle of Wight, writes:—"From my own observation I consider the 'Rodine' advertisement in the County Press has done more than anything to increase sales."

Appointed Agents not only receive attractive circulars with their name and address printed thereon, but are advertised in their local weekly paper. It pays to be a "Rodine" Agent. Write re Agency to the Proprietor.



## HARLEY,

Manufacturing Chemist,  
PERTH, SCOTLAND.



FINEST  
QUALITY.  
PERFECTLY  
SOUND  
CONTAINERS

## WATER GLASS

FOR EGG PRESERVING

It will pay you to write

Tomlinson & Hayward, Ltd., Lincoln.

Every Wise Farmer  
Uses



Tipper's  
COWS  
RELIEF



RETAIL PRICES :  
3/-, 7/-, 15/-, and  
23/- per tin.

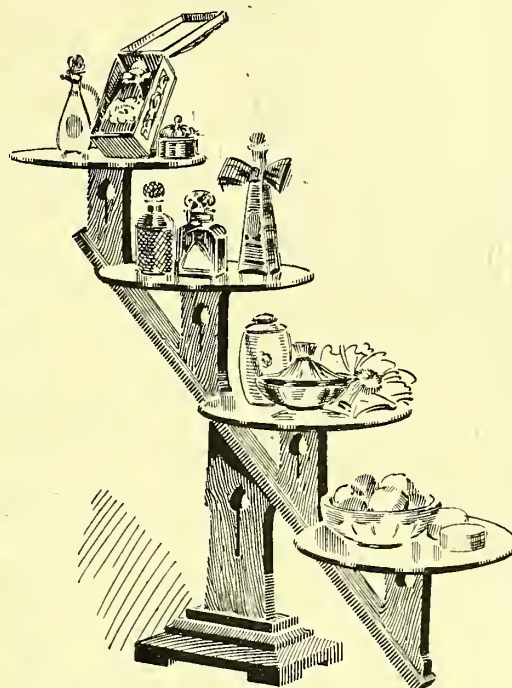
Invoiced to the Trade  
at  
2/9, 6/6, 14/6, and  
22/6 respectively,  
and subject to 20%  
discount.

Carriage paid on orders of  
40/- net. Postage charged on  
small lots.

B. C. TIPPER & SON,  
The Veterinary Chemical Works,  
BIRMINGHAM.

# DISPLAY STANDS

that increase  
your Sales



D. 268.—A very attractive Window or Counter Stand, light oak. Height over all 24 in., with four supports covered green baize. Complete with four 10-in. circle plate-glass shelves 40/-

Why not call at our Showrooms and let us demonstrate to you the possibilities of your window? As experts, we can offer you valuable advice, and our Showrooms, we feel sure, will interest you.

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Particulars of a Special Series of Competitions for bona fide Amateur Photographers—designed to assist your sales—will be available shortly. In the meantime, we shall be pleased to send you particulars of the above lines, with a note of special terms for Chemists.

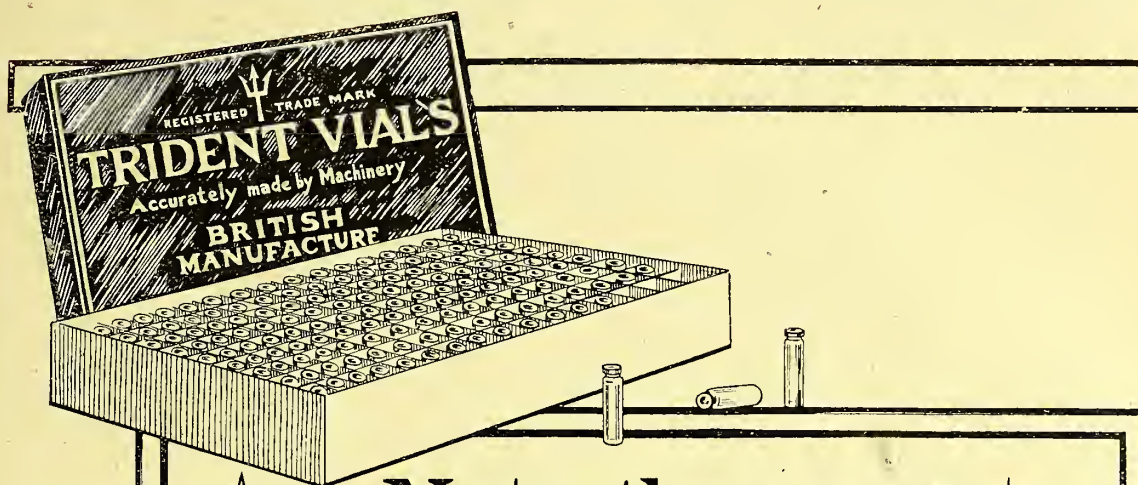
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Telephone : Regent 1230 (3 lines).

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THE Trident Vial illustrated below on the left has a long neck, and a specially formed flanged lip, so devised as to overcome the difficulty of pouring, which has hitherto been the great defect with short neck vials.

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Sole Manufacturers—  
**JOHNSON & JORGENSEN FLINT GLASS LIMITED**  
26 & 27 FARRINGTON STREET, LONDON, E.C. 4.  
**WHOLESALE ONLY.**

Telephone :  
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# IF SOMEONE ASKED YOU WHY MAY, ROBERTS'

is so universally recognised as the leading house in the Chemists' Sundries trade, what answer would you give?

Suppose that the question were raised at the next District Association Meeting, most of those present would agree, but could they say why?

We confess that in those rare moments when we have time to sit back and look at our reflection in the flattering mirror of a turnover which steadily increases despite decreasing values, we do not find that the problem admits of an easy solution.

It is to this conviction in the mind of the Pharmacist that we owe the whole of our trade (for we employ no travellers and advertise very little), and while we are proud to believe the opinion justified, still—

## WHY IS MAY, ROBERTS' THE LEADING DISTRIBUTING HOUSE?

What are the factors that count for success in our trade?

Cheapness, Celerity and Accuracy, yes, and we claim to have developed these virtues to a high degree; but so do others, and since all men are not liars, it is probable that they have.

Possibly we succeed in going just one better every time, and this explains our success in a measure, but still we are not satisfied that any of these constitute the master-key to the situation.

We should welcome any suggestions as to the solution, and in the meantime if any of our friends who are not yet our customers would like copies of our Lists and Terms, we shall be happy to send them.

**MAY, ROBERTS & CO., LTD.**  
**7/13 CLERKENWELL ROAD, LONDON, E.C. 1.**  
*And at Dublin and Plymouth.*



# THE CHEMIST AND DRUGGIST SUPPLEMENT

42 CANNON ST.  
LONDON E.C. 4

FEBRUARY 25, 1922

*This Supplement is inserted in every copy of The Chemist & Druggist.*

## THE CHEMIST AND DRUGGIST SUPPLEMENT REVISED ADVERTISEMENT TARIFF.

**Businesses Wanted and for Disposal, Premises to Let, Goods and Shopfittings for Sale, and Agencies:** 6/- for 50 words; every additional 10 words or less, 6d.

**SITUATIONS OPEN:** 6/- for 40 words; every additional 10 words or less, 6d.

**SITUATIONS WANTED:** 2/- for 18 words; every additional 10 words or less, 6d.

**Legal Notices, Tenders, Auctions,** and all specially-spaced announcements, 1/3 per nonpareil line (12 lines = 1 inch single column).

**Miscellaneous (Wholesalers') Section** for odd and second-hand lots: 10/- for 60 words; 1/- for every additional 10 words or less.

**EXCHANGE COLUMN** (for Retailers, etc.): Two-pence per word, minimum 2/-

### BOX NUMBER.

In each case replies may be addressed to a registered number or nom-de-plume, c/o this Office, at a charge of 1/- extra for each advertisement.

### PAYMENT.

All Advertisements are prepaid, so that remittance must accompany instructions in each case. If it be necessary to telephone or telegraph an urgent announcement this may be done, provided the money is telegraphed at the same time.

THE CHEMIST AND DRUGGIST, 42 Cannon Street, LONDON, E.C. 4.

Telephone: Central 3617 (3 lines).

Telegrams: "Chemicus, Cannon, London" (2 words).

**EARLIER CLOSING FOR PRESS.** Will advertisers please note that until further notice it will be necessary that Advertisements intended for the Supplement must reach us not later than the **FIRST POST THURSDAY MORNING.**

## CHEMISTS' TRANSFERS.

### Messrs. ORRIDGE & CO., 56 Ludgate Hill, E.C.

Telephone No.: City 2283.

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

1.—LONDON, W.—Death vacancy; high-class Dispensing and Retail Business; gross receipts between £6,000 and £7,000; *profit (gross)* 45%; well-fitted double-fronted shop, fully stocked; good residence; 21 years' lease; price about £5,000, or valuation terms if desired.

2.—GREAT PORTLAND STREET (near).—Ready-money Business; lock-up shop, recently established; opening to do about £40 weekly; price, to include stock, fixtures, lease, etc., £800.

3.—STRAND (near).—Well-established Business, surrounded by first-class hotels; gross turnover upwards of £5,000, at full prices; well-fitted shop, fully stocked; good opening for two energetic men with capital at command.

4.—LONDON, W.C.—For disposal, a unique Pharmacy situate in close proximity to several hotels; returns, present rate, £2,000, at full prices; well-fitted shop, fully stocked; an opening presents to do £5,000 to £6,000 per annum; lock-up shop; held on lease.

5.—WHOLESALE BUSINESS, established upwards of a century; a number of Proprietaries are included, which are stocked by most Chemists in the kingdom; returns between £4,000 and £5,000; terms, stock and plant at valuation, and sum for goodwill to be agreed equitably.

6.—SOUTH INDIA.—Well-appointed Pharmacy, trading chiefly wif. English residents; returns last year Rs. 23,386; the premises comprise magnificent building of two stories, furnished throughout; all further information will be furnished on application.

7.—CHELSEA.—Neglected Drug Store; established many years; opening for qualified man; premises may be purchased; price for stock and fixtures £250.

8.—ESSEX.—Old-established Business; returns £3,900; books audited; *net profit* £825; estimated value of stock £2,000; vendor's own premises; new lease will be granted at a rental of £80; price about £3,000 for prompt transfer.

9.—YORKSHIRE (large town).—Ready-money Drug Store; returns about £100 per month; scope for development under qualified management; well-fitted shop, fully stocked; rent £40; held on lease.

10.—LANCS.—General Retail and Dispensing Business; established 30 years; returns average £1,050, and *net profit* over 25%; single-fronted shop; rent £50; lease can be had; price £600.

11.—DEVON COAST.—Established Business; excellent position; sea view; returns between £2,000 and £2,500 yearly; *net profit* 25%; well-appointed shop, fully stocked; price £1,800; the freehold may also be acquired.

12.—MIDLANDS.—Ready-money Business, situate in town with population of 100,000; returns £500; scope for large development under energetic management; rent £30; price to be agreed.

13.—STAFFS.—Cash Retail Business; returns average £18 weekly; *net profit* one-third; lock-up shop; inclusive rent 8s. 6d. weekly; price about £600.

14.—SOUTH COAST.—Cash Retail Business, including Postal trade; gross receipts about £12,000 per annum, at full prices; further particulars on application.

## VALUATIONS FOR STOCKTAKING.

Messrs. O. & Co. desire to emphasize the necessity of a periodical Statement of Account by which means alone *Profit, the value of Business, &c.* can be determined. Involving as this does the labour of Stocktaking and Valuation, it is often omitted and eventually becomes the cause of confusion and loss.

Messrs. O. & Co. are prepared to undertake these essential duties and make **Special Terms** for such services.

**ORRIDGE & CO., 56 LUDGATE HILL, LONDON, E.C. 4**



# BERDOE & FISH

*Valuers and Transfer Agents*

35 JEWRY STREET, FENCHURCH STREET, E.C.3.

Telephone: 1809 Central.

## SPECIAL NOTICE

to

## INTENDING VENDORS.

Messrs. Berdoe & Fish having disposed of all Businesses placed in their hands, are now in immediate want of sound businesses in all parts of England, especially London, South Coast, S.W. and Western Counties, Midlands and Home Counties, at prices ranging from £800 to £3,000.

**We have cash buyers waiting,  
and can guarantee quick sales  
with the utmost privacy.**

*Private register kept. Terms sent on application.*

**Established 1870.**

## The Association of Manufacturing Chemists

— LIMITED —

Head Offices—26/28 Kimberley House,  
Holborn Viaduct, London, E.C.1

(and at 2 Bixteth Street, Liverpool).

PARKIN S. BOOTH, Accountant & Valuer.

PHONE: CITY 6942-43.

WE HAVE THE FOLLOWING BUSINESSES FOR DISPOSAL.

1.—Situate at Richmond, Surrey, small Manufacturing Chemist's and Toilet Business, owning several proprietary lines; excellent factory, with living accommodation above; premises held on lease for 20 years at very low rental; inspection invited.

2.—HOLBORN CIRCUS, E.C. (close).—Fine modern Manufacturing Premises to be Let, comprising basement, ground and three floors over; floor area about 5,000 sq. ft., divided into excellent offices, showrooms, workrooms, storage, etc.; fireproof floors, hydraulic lift, central heating, electric light; ample lavatory accommodation; new condition; exceptionally well lighted; immediate possession; low rent; reasonable price for lease of 55 years.

3.—Proprietary Article for Sale; business has good connection among Chemists. Full particulars on application.

4.—Wholesale Business, dealing chiefly in Toilet Specialities; established four years; excellent connection; good turnover; factory 3,000 sq. ft., with house adjoining; held on lease of 21 years; fullest investigation invited; balance sheets can be inspected; fullest particulars on application.

5.—Situate at Bath, very old-established Chemist's Business; well stocked and excellently fitted; large shop and dispensaries, with good dwelling accommodation above; premises held on lease, 20 years to run, at rental of £240; excellent clientele and plenty of scope. Full particulars on application.

6.—WEST END PHARMACY.—Beautifully fitted and well stocked; shop and basement, held on lease for 6 years; situate close to many first-class hotels; room for scope; good opportunity under capable management.

**Stocktaking and Valuations for all purposes  
undertaken upon Reasonable Terms.**

## BAKER & ROBERT'S

P. C. Baker, Ph.C., M.P.S. W. Rooke Roberts, M.P.S., F.S.M.C.

174 VICTORIA ST., S.W. 1. Tel.: VICTORIA 27.

*Valuers for Sale or Purchase,  
Income Tax, Probate, etc.*

Personal attention, no publicity.  
please write for moderate terms.

Recommended by The British Drug Houses, Messrs. Meggeson, Ltd., Messrs. Barclay & Sons, Ltd., and many other leading Wholesale Houses.

## CHARLES C. MARSDEN

*Valuer, Transfer Agent & Stocktaker,*

44 Sholebroke View, Chapeltown Road, Leeds.

*Special Terms for Stocktaking and Pricing of  
Chemists' own Stock Sheets.*

All Valuations have the personal attention of C. C. Marsden.

## BRETT & CO.

All Valuations have the personal attention of F. J. Brett, M.P.S.

*Transfer Agents and Valuers,*

73 LAUREL ROAD, LEICESTER.

Telephone: 1934.

## BUSINESSES WANTED.

## THOS. TOMLINSON & SON

**CHEMISTS' VALUERS, TRANSFER AGENTS,  
AND EXPERT STOCKTAKERS;**

45a MARKET STREET, MANCHESTER.

ESTABLISHED OVER HALF A CENTURY.

Telegraphic Address: "Tomtom."

## ERNEST J. GEORGE

**EFFICIENT STOCKTAKING**

is NOT a mere record of the value of articles in stock, but an intelligent survey of the whole business.

My methods ensure this, if required.

**138 Lichfield St., WALSALL**



**LEGAL.**

**ARTHUR WELLESLEY WHITE**, trading as J. M. Smith & Co., of The Hampton Chemical Works, Arthur Street, Old Kent Road, London, S.E. 15.

All persons having claims against the Estate of Mr. A. W. White, who died on the 10th day of February, 1922, are hereby required to send particulars of such claims to the undersigned, the Solicitors for the Executors, on or before the 31st day of March, 1922.

Dated this 20th day of February, 1922.

**CORSELLIS & BERNEY**,  
Solicitors.

128 High Road, Balham, S.W.

**BUSINESSES WANTED.**

The ADVERTISER may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

**LONDON** or Near.—Genuine, compact, good-class Business; lock-up shop; preferably no N.H.I.; capable of being run single-handed or with unqualified Assistant; capital and security up to £1,400; can take over in four weeks; all replies treated in strictest confidence. P.C.B. 4/35, Office of this Paper.

**WANTED** (at once), genuine Chemist's Business in North or Midland town; one doing from £1,000 to £2,000; neglected business not objected to if scope for increase; cash waiting. Apply to 144/27, Office of this Paper.

**WANTED**, Drug Store; lock-up shop and parlour only; Midlands preferred; particulars treated confidentially. Apply G. D. North, 48 Morpeth Street, Hull.

**WANTED**, working or middle-class Cash Business, taking £1,500 to £2,000 per annum; South or South-West preferred; housing accommodation essential; early possession. Reply "M.P.S." (145/38), Office of this Paper.

**BUSINESSES FOR DISPOSAL.**

6s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

The ADVERTISER may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

**CHELSEA** Drug Stores, established 20 years, now under management unqualified female; no Dispensing or N.H.I.; opportunity for qualified person; must purchase leasehold premises 56 years; ground rent £10 per annum; price £650; business, etc., £250. Particulars from Wharton & Stunt, 3 Crooked Lane, E.C. 4.

**LONDON, E.C.**—Old-established Retail Business; been entirely under Manager for many years; large double-fronted shop; best position in busy street; turnover £2,500; could easily be doubled by energetic man; price £1,900. Apply 145/15, Office of this Paper.

**SOUTH STAFFS.**—Cash Retail Business with Dispensing; takings £18 weekly; N.H.I. over 400 per month; lock-up shop at low rent; scope for increase; growing working-class district; splendid opportunity for energetic man; low price for quick sale. Apply 143/35, Office of this Paper.

**DRUG STORES**, S.E. district; trade £18 to £20 per week, under management; old-established Business, about 40 years, nicely situated; good-class trade; could be greatly improved; carrying very heavy stock of good selling lines; 12 years' lease to run. For price and particulars write T. N. B., 98 Danes Road, Forest Gate, E. 7.

**GENUINE** up-to-date Drug Store; good-class residential suburb of London; good shopping centre; large double-fronted shop; house with all convenience; vacant possession; takings about £40 per week, at good prices; scope for increase; large stock; cash price £1,200; further details to bona-fide buyers with references. Apply P.C.B. 4/16, Office of this Paper.

**MANUFACTURING** District (Yorkshire).—Well-fitted cash Retail; modern shop, small house attached; established 100 years; present occupier 30 years; cash price £500. Apply 144/18, Office of this Paper.

**MODERN** Pharmacy for Sale near Victoria; three years under present ownership; turnover £2,000 yearly, steadily increasing, and could be considerably improved; goodwill, fittings, fixtures, and large stock, £1,850; references required before full particulars given. Apply 144/38, Office of this Paper.

**AGENCIES.**

Advertiser, having very influential connections in Germany, will be pleased to receive enquiries for

**CHEMICALS**

AND ANY OTHER LINES.

Apply ("L" 2/38) c/o "Chemist & Druggist," 42 Cannon Street, E.C. 4.

**IRELAND.**

REPRESENTATIVES OR BUYING AGENTS WANTED.

We are open to consider applications for Agency for above ground, either commission or buying Agent, for "Red Band Bismuthated Magnesia" and other products; good references essential. Red Band Chemical Co., Richmond Terrace, Edinburgh.

**AGENT** for large French Soap Works requires additional non-competing lines; whole of the British Isles systematically covered; excellent credentials; any lines suitable for Chemists, Hairdressers, etc. Apply, in first instance, to "Agent," 31 Church Road, Homerton, E. 9

**ENGLISH** Chemist, with 20 years' commercial experience in Spanish- and French-speaking countries, returning to North of Spain end of March, open to engagement as Representative or Agent for Drugs, Chemicals, Sundries, or Proprietary Lines. Address S. S. S. (P.C.B. 4/38), Office of this Paper.

**FOR SALE.**

**FOR** Sale, 1 cwt. Camphor at 5s. lb.; 1 cwt. Pot. Permang. at 11d. W. H. Harrison, Chemist, C.-C.-H., Manchester.

**LANOLINE** ANHYDROUS.—One 1-cwt. keg guaranteed B.P., in good condition, for sale, cheap; offers invited. Reply ("L" 2/66), Office of this Paper.

**PARTNERSHIPS.**

**M.P.S.** (26), single, requires active interest in established business; London or Home Counties preferred; disengaged in one month; full details as to cash available, experience, etc., on application. Replies, in strict confidence, to "Punctual" (144/20), Office of this Paper.

**SITUATIONS OPEN.****RETAIL.**

6s. for 40 words or less; 6d. for every additional 10 words or less, prepaid.

The ADVERTISER may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

**BIRMINGHAM.**—Qualified Assistant for Dispensing and Photographic business; send references, stating age and salary required. Apply 144/17, Office of this Paper.

**BROADSTAIRS.**—About 20th March; a competent Assistant, accustomed to high-class Retail and Dispensing, with Photographies. Kindly give full details of experience (in first letter), also age, height, salary required (outdoors), to D. T. Evans, Ltd., Chemists and Opticians, 5 High Street.

**CITY.**—Wanted, a competent Junior, over 25 years of age (not qualified), well used to Dispensing and General Retail; permanency to suitable man. Give experience and all particulars, salary, etc., to "X. Y. Z." (P.C.B. 5/6), Office of this Paper.

**GLOUCESTER.**—Assistant (outdoors); single; male, with good Dispensing experience. Full particulars and photo to Ward & Woodman, Gloucester.

**LONDON, N.**—Wanted, a young qualified Assistant; must be a good Dispenser and Window-dresser, and have a knowledge of Photography. Apply personally or by letter, giving full particulars as to experience, and enclosing photo, to Bailey, 64 High Street, Highgate, N. 6.



**LONDON, N.**—Wanted, a qualified man, capable of taking charge of good middle-class brisk cash trade; must be energetic, good Salesman, and reliable. Apply, with full particulars as to age, salary required, and past experience (London district applicants only), 144/23, Office of this Paper.

**LONDON, N.W.**—Wanted, for good-class Dispensing Business, an experienced Assistant, single, qualified or unqualified, indoors; reliable Dispenser; comfortable berth for right man. Full particulars, age, height, experience, and salary required, to P.C.B. 5/4, Office of this Paper.

**LONDON, S.W.**—Wanted, a good Assistant for quick counter trade (unqualified). Apply by letter, give all particulars and copy of references, Williamson, 31 High Street, Clapham.

**LONDON, S.W.**—Early in March an Assistant is wanted (outdoors) for a brisk ready-money business; not under 23 years of age, with good experience and used to N.H.I. Apply, with full particulars of age, height, and salary required, to Whiting, 204 Ebury Street, S.W.1.

**MANCHESTER.**—Qualified man required for quick city trade; must be good Window-dresser, energetic, keen, and capable salesman, and have thorough knowledge of Photography; state age, height, experience, salary required, and full particulars. Bryan & Spedding, Ltd., 48 Deansgate, Manchester.

**NEW BRIGHTON.**—Immediately, capable Assistant for Light Retail and Dispensing; good Window-dresser, Counterman, and Dispenser; short hours; full details, including salary required, in first letter; if unanswered four days courteously declined. Mills, 134 Seabank Road, New Brighton.

**OXFORD.**—Junior or Improver required; Dispensing, Counter, Photographic, and general Retail; outdoors; please give full particulars, age, height, photo (if possible), salary required, and references. Rose, Chemist, Bullingdon Road, Oxford.

**SOUTH DEVON COAST.**—Wanted, Junior Assistant (outdoors) for good-class general business; short hours; knowledge of Photography an advantage. Full particulars and reference, with salary required, to 145/22, Office of this Paper.

**SOUTH WALES.**—Smart, all-round Assistant, qualified or unqualified, for quick cash trade; experienced Dispenser; strictly sober and industrious; encouragement given to business builder; good references essential; full particulars and salary expected first letter; applications unanswered seven days declined. 144/10, Office of this Paper.

**SOUTH YORKSHIRE.**—Wanted, smart, energetic Assistant for all-round business; must be good Counterman, Window-dresser, and willing to work; applicants should state age, height, experience, salary required, with references, in first letter. "L. A. W." (144/33), Office of this Paper.

**A QUALIFIED Assistant**, 24 to 30, outdoors, required for up-to-date business; accurate Dispenser, quick at Counter, and Window-dresser. State full particulars as to age, experience, salary required, etc., to S. Baker, Chemist, 16 Church Street, Greenwich, S.E. 10.

**ASSISTANT**; qualified; 25-30; tall; of good appearance and address; tactful; experienced Salesman; chiefly for Counter; conversant with modern business methods; possessing an up-to-date practical knowledge of the Photographic trade, Counter, and Dark Room; brisk, good-class business; home county. Apply 143/16, Office of this Paper.

**ASSISTANT**, young, unqualified, required for London, S.W. district; must be willing and good worker, steady and reliable; permanency for right man; state age, references, and salary required. Apply 143/15, Office of this Paper.

**ASSISTANT**, qualified; energetic; single; under 30; outdoors; good Counter experience most necessary. Please state full particulars (age, height, experience, when disengaged, salary), enclosing two last references and photograph, to Wain, Chemist, Ripley, near Derby.

**CAPABLE**, energetic Pharmacist wanted in a good-class Dispensing and Retail business in South-East of England; to a suitable applicant progressive terms and a probable manager-ship, with interest in business, would be offered; initiative, good training, and methodical habits are essential; age from 25 to 35 years. Apply, with full particulars, to 145/19, Office of this Paper.

**DISPENSER**, with good experience, required; assist at Counter when necessary; good-class business; Midlands. Full particulars to 145/31, Office of this Paper.

**MANAGER** required for Midlands; old-established business; thoroughly experienced; full responsibility; dwelling-house provided. Apply, stating qualifications, age, married or single, and salary required, to Wall & James, Solicitors, Stourbridge.

**PHARMACIST** and Optician required shortly to establish and develop Chemist's and Optician's business for The Hartlepool Co-operative Society, Ltd.; keen business man required, with initiative and ability, capable of opening branches and controlling staffs; position carries exceptional prospects for the right man. Apply to the Secretary of The Hartlepool Co-operative Society, Ltd., Stockton Street, West Hartlepool, for a special form of application.

**QUALIFIED Assistant**, single and under 30 preferred, for working-class trade, industrial district, Yorkshire town; moderate salary to commence; only those willing to tackle all branches of the trade entertained; applicants not answered within 14 days respectfully declined; give usual particulars and salary required. Apply 143/24, Office of this Paper.

**QUALIFIED Assistant** wanted; smart Salesman, good Window-dresser, with knowledge of Photography. Apply, stating full particulars, to Clegg, 1 Broad Street, Teddington.

**QUALIFIED Assistant**, young, energetic, reliable, to assist at both counters; hours 8.30 to 7, half-holiday, Saturday 9 o'clock; state salary required and references. Carr, Chemist, 40 Wollaston Road, Cleethorpes.

**QUALIFIED Pharmacist** required; well educated, well trained, generally superior young man, with appearance; Dispensing experience. Philip Harris, Edmund Street, Birmingham.

**WANTED**, a Junior Assistant; quick and accurate Dispenser; knowledge of Photography; salary required, references, etc., in first letter. C. G. Higgins, Chemist, Church Street Pharmacy, Calne, Wiltshire.

**WANTED**, Assistant (male) for Wednesday evenings 6-8 and other evenings by arrangement; good references essential; one living in district preferred. Apply Lloyd, 267 King's Road, Chelsea, S.W.

**WANTED**, by country Doctor, a Dispenser-Bookkeeper; must be accurate and reliable; outdoors; salary £2 10s. a week 143/28, Office of this Paper.

## WHOLESALE.

6s. for 40 words or less; 6d. for every additional 10 words or less, prepaid.

The ADVERTISER may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

**ASSISTANT** (unqualified) for Manufacturing Laboratory, required at once; Liverpool district; give full particulars of experience, references, etc., in first letter; excellent prospects for right man. 145/13, Office of this Paper.

**DRY COUNTER HAND.**—Junior wanted for the Dry Counter. Apply Hodgkinson, Prestons & King, 262 Bishopsgate, E.C.

**EXPORT Clerk**; Patents, Sundries, Packed Goods, and Drugs; Shorthand and Typewriting an advantage. State age and experience, and salary required, P.C.B. 4/36, Office of this Paper.

**LIVE Representative** wanted by up-to-date Sundries House for:

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- (b) Cumberland and Westmorland.
- (c) Wirral Peninsula.

Specially attractive lines at competitive prices; generous commission to live Salesmen, having sound connection. Please reply, fully, 145/24, Office of this Paper.

**OUTDOOR Representative** wanted for leading Proprietary Toilet Line; London district only; must be experienced and with good connection; inquiries invited only from energetic and progressive men. Apply ("L." 2/63), Office of this Paper.

**REPRESENTATIVE**, with connection amongst Chemists and Doctors in South West and Midlands, by firm manufacturing Fine Chemicals, Tablets, Galenicals, Chemists' Sundries, Photographics; liberal commission. Apply 2/590, Office of this Paper.

## RETURNING PHOTOS, &c.

Advertisers in this section who receive portraits and copies of testimonials from applicants with a stamped addressed envelope for reply are reminded that the undue retention of these often means a hardship to the sender. All personal documents should be returned as promptly as possible after perusal.



## OPPORTUNITY

A new and ORIGINAL line, selling at 7½d., a proven seller, which the public eagerly buy. Does not clash with any other line sold by Chemists and Stores.

LIGHT SAMPLES. SMART PACK. Powerful SIX-COLOUR SHOWCARDS.

The above presents a unique opportunity to live salesmen who can control big business and have the confidence of their clients.

All applications will be treated with absolute confidence, and will not be considered unless full details are sent with first letter.

Commission terms 15%. Permanent Agencies given to the right men when proven, or Buying Agency terms arranged.

All territory open except Lancashire.

Only men who can prove strong successful selling records need apply, hence please give exact ground covered, number of accounts open, present lines carried, trade done, and usual references, which must bear strict investigation, to "Unique" ("L" 2/60), Office of this Paper.

**REPRESENTATIVE.**—Qualified Chemist to represent concern in presenting well-known proprietary Medicine to the medical profession. Letter only, stating age, experience, and references, Stone-Ballantine, Ltd., 13 Well Court, Queen Street, E.C. 4.

**REPRESENTATIVE**, with live connection among Chemists in South Wales and West of England, wanted by well-known and old-established firm, manufacturing Pills and Tablets; commission basis; part time not objected to. Applications, giving full particulars, stating ground covered, will be treated in strict confidence. Replies: "Extension" ("L." 2/43), Office of this Paper.

**REPRESENTATIVE** (part-time) for well-advertised Proprietary Toilet Preparations wanted for London and suburbs, also for Midland Counties; liberal commission; only those having good connection amongst Chemists, Drapers, and Stores need apply. ("L." 2/65), Office of this Paper.

**REPRESENTATIVES** wanted for proprietary line well established, but which is now to be extensively advertised and developed; commission terms only, but on satisfactory basis to suitable gentlemen able to secure opening business with good Chemists and Drug Stores. Apply "L." 2/58, Office of this Paper.

**REPRESENTATIVES** for provinces required by manufacturer of Soap, Perfumery, and Packed Goods; must have an established connection among Chemists and Perfumers; expenses and commission. Apply, giving full particulars and experience, "L." 2/61, Office of this Paper.

**RESIDENT Agent** required for the Northern and Eastern Counties of Ireland, with sound connection amongst Chemists, Stores, Hairdressers, by London manufacturers of high-class Soaps, Perfumes, and Toilet Preparations; thorough knowledge of the trade necessary; liberal commission terms. Apply, with full particulars as to age, past experience, to "A. B. C." ("L." 2/49), Office of this Paper.

**SEIDLITZ Powders, etc.**—Representatives, on commission basis, wanted in all districts; live connection with Retail Chemists essential. State age, experience, and exact area covered, Raimes & Co., Ltd., Stockton-on-Tees.

**TRAVELLERS** (London and provinces), experienced in Toilet Preparations or Proprietary Articles; excellent opportunity to represent old-established house; well-advertised product; big seller; straight salary; only experienced Travellers wanted, who have a following among the Chemists. Write, stating full qualifications, references, and salary expected, Box 192, c/o C. Mitchell & Co., Ltd., 1 & 2 Snow Hill, London, E.O. 1.

**TRAVELLERS** required, to call on Chemists in North of England for old-established firm; applicants must have personal connection. ("L." 2/62), Office of this Paper.

**WANTED**, Representatives for well-advertised Perfumery and Toilet goods, for North and East territories; only young, keen, well-educated men need apply; salary £10 and commission, no expenses. Amami Ltd., 4-10 Chenies Street, London, W.C. 1.

**WORKS Foreman** with experience in manufacture of Pharmaceuticals, Galenicals, etc. Apply "L." 2/59, Office of this Paper.

## SITUATIONS WANTED.

### [HOME.]

### RETAIL.

2s. for 18 words or less; 6d. for every additional 10 words or less, prepaid.

The ADVERTISER may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

**A.A.A.A.**—COMPETENT Pharmacist (26), single, desires situation; eight years' experience; accurate Dispenser, smart Window-dresser; knowledge of Photography; moderate salary. Pharmacist, 62 Fenton Road, Bournemouth.

**A.A.**—ASSISTANT (lady), Minor, 23, tall, with good experience in Dispensing and Retail, requires post; London district preferred, but not essential. Apply 141/19, Office of this Paper.

**A** CAPABLE, experienced woman Dispenser (Hall) wants post or Locum; disengaged. "Dispenser," 108 Lower Richmond Road, Putney, S.W.

**A** LADY Dispenser (20), Hall, requires post; experience in Dispensing and Bookkeeping. Apply Thomas, Tygwyn, Johnstown, Carmarthen.

**A** MAJOR Man, Scotsman, young, well educated, keen, wishes job in large centre; London preferred; moderate salary. 145/32, Office of this Paper.

**A** PHARMACIST (30), married, qualified 1914, ambitious, thoroughly willing, industrious, trustworthy, capable, requires position; able to undertake sole control and thereby relieve proprietor; not afraid of long hours to right employer. Reply "James," 6 Holmwood Gardens, Finchley.

**A** QUALIFIED Pharmacist (30) desires position as Manager or Assistant; first-class references. Rowan, Ailsa Cottage, Fort Ayr, N.B.

**A** QUALIFIED Pharmacist (35); wide experience; excellent references; single; abstainer; disengaged March 5th. Thomas, 45 Harrow View, Harrow.

**A** N experienced Assistant, elderly, requires part-time employment, mornings, evenings, week-ends; moderate. "Statim," 38a Broadway Parade, Crouch End, N. 8.

**A** PPRENTICESHIP desired in good-class Pharmacy; North London preferred; 18; tall; smart; educated. S. Barnes, 38 Avenue Road, Highgate, N. 6.

**A** S Assistant Dispenser; age 27; married; two years' experience as Assistant Dispenser and Dresser. Apply M.L. 75259/21, Office of this Paper.

**A** SSISTANT or Manager, age 36; single; educated Edinburgh University; thoroughly experienced; conversant with medical professions. Apply M.L. 97404, Office of this Paper.

**A** SSISTANT; 42; war service 15 months; 13 years' experience as Chemist's Assistant. Apply M.L. 8656/21, Office of this Paper.

**A** SSISTANT; Scotch; unqualified; 26; single; good testimonials; reliable Dispenser; good Counterman; experienced in Veterinary Prescribing; neat, active, willing; good address, at present Scotland Address P.C.B. 95/32, Office of this Paper.

**A** SSISTANT; brisk Counter trade, light Dispensing, Windows, Stock; 55s. weekly; satisfactory references; excellent general experience. "Reliable" (141/20), Office of this Paper.

**A** SSISTANT (28), tall; unqualified; 13 years' varied experience in Dispensing, Counter, Photography, Windows, etc., requires change (permanent or otherwise); please state salary offered. "Hexamine" (143/29), Office of this Paper.

**A** SSISTANT, unqualified; 18 years' good varied experience, London and country; now disengaged, "Alpha" (P.C.B. 4/35), Office of this Paper.

**A** SSISTANT (29); unqualified; 12 years' good all-round experience; excellent testimonials; moderate salary; disengaged. "Abstainer," 1 James Street, Rochester.

**A** SSISTANT, unqualified; good Counter and Dispensing experience. Searle, 2 Carlisle Avenue, Plymouth.

**A** SSISTANT (26); well up in Dispensing, also Counter and Photography; good-class experience; permanency desired; provincial. S. C. Haigh, 25 Stafford Parade, Halifax.

We desire particularly to draw the attention of Colonial and Foreign Subscribers to the fact that in cases where they require partners, agents or assistants, or wish to sell their businesses, an Advertisement in this Supplement, placed in every copy of "The Chemist and Druggist," should be the readiest means of helping them to attain their object. The tariff for such announcements is given under the appropriate headings in the Supplement. Instructions and remittances can be sent to us direct or through the advertisers' correspondents in this country.



**ASSISTANT** (lady, 20); Dispensing, all-round shop experience; energetic, trustworthy. Wright, 30 Ormonde Road, Hythe, Kent.

**ASSISTANT** (lady), reliable, with 4 years' experience, requires whole or part time; excellent testimonials; moderate salary; Birmingham district. Apply 144/21, Office of this Paper.

**ASSISTANT** (24), tall, qualified, seven years' experience, requires position; moderate salary; interview London or Home Counties. Apply 144/30, Office of this Paper.

**ASSISTANT**, unqualified, 15 years' all-round experience; capable of taking charge; where only one is kept preferred. Address "Beta" (145/11), Office of this Paper.

**BIRMINGHAM** District.—Qualified; thoroughly experienced and competent; permanency or locum; moderate salary; disengaged; age 49. 145/30, Office of this Paper.

**BOY**, age 16, just left school, wants situation as Apprentice for 3 years; live in. Jessop, High Street, Newport, Salop.

**CHEMIST'S** Son, qualified, young, good appearance and address, smart Dispenser, Square trained, 16 months' Manership in large business, desires situation; West London preferred. "Moderate," 29 Westcombe Hill, Blackheath.

**CAPABLE** Assistant, accustomed to Dispensing, Counter, Stock, Photography, Window-dressing; anywhere; anything. "Chemious," Hartley House, Ethelbert Road, Westgate-on-Sea, Kent.

**CLERICAL**.—Day or evening work of any kind; writing up accounts and posting up books; terms moderate. Write "F. G." (134/14), Office of this Paper.

**DEVON OR DOBSET**.—Pharmacist desires position in either county as Manager or Senior (with view to succession, if possible); young; single; energetic; first-class experience in Dispensing, Counter, Prescribing, and Photography; highest references; disengaged end of March. "M.P.S.," c/o 6a Rutland Park Gardens, Willesden Green, N.W. 2.

**DISENGAGED**, competent Assistant; good all-round West-End experience; Locum or permanency. Arthur, 50 Ivanhoe Road, Grove Hill Road, Camberwell, London, S.E. 5.

**DISENGAGED**; Locum, permanency; Dispensing, Counter, Stock; active; moderate salary; unqualified; 45. Fletcher, 11 Kingsdown Road, Holloway, N. 19.

**DISENGAGED** (48), qualified, experienced; good Dispenser; locum or permanent; excellent references. "Statim," 27 Blackstock Road, Finsbury Park, N.

**DISPENSER**; age 26; single; qualified Dispenser; good experience; X-ray Operator and Electrician; General Medical Hospital and Chemical experience. Apply M.L. 50619, Office of this Paper.

**DISPENSER** (lady), Minor qualification, excellent testimonials, some Hospital experience requires post, Hospital, Doctor, or as Dispenser in business. Pearson, Hillcrest, Lowdham, Notts.

**DISPENSER** (Hall) requires post with Doctor, Institution, or Chemist. Apply 133/35 Office of this Paper.

**DISPENSER** (19), Hall, desires post with Doctor, Chemist, or Institution; Bookkeeping. Miss White, 131 Welholme Road, Grimsby.

**DISPENSER** to Doctor requires post; well-experienced; Book-keeping, Secretarial work; excellent references. K., 37 Easton Street, High Wycombe.

**EXPERIENCED** Assistant (31); Dispensing, Photography, and excellent Counter Hand; six years last situation; capable of taking charge; married; good references. "Statim," 92 Sydenham Road North, West Croydon.

**EXPERIENCED** Dispenser (Hall), lady; locum or permanent; experienced Hospital, Surgery (Bookkeeping); excellent testimonials; in or near London. 144/39, Office of this Paper.

**JUNIOR** (unqualified), all-round experience, including Window-dressing, Photography, etc.; very good references. Apply 143/22, Office of this Paper.

**JUNIOR** (19) seeks progressive berth; experienced in Dispensing, Counter work, and Window-dressing; good references. F. C. Hodgson, 55 Princes Gardens, Peterborough.

**LADY** Dispenser (26), linguist, 8 years' experience, excellent testimonials, disengaged, desires post, Doctor, in or near London; willing to help in Surgery, etc. 122 Old Bedford Road, Luton.

**LADY** Dispenser desires post (London); qualified; 12 years' experience; excellent testimonials. 145/35, Office of this Paper.

**LANCASHIRE** man (25), qualified, smart, splendid suburban experience, shortly terminating West-End engagement, is open for fresh offers; specialties, Dispensing and Photographics; would accept summer post; can wait if necessary; moderate salary. 144/37, Office of this Paper.

**LOOUM**, for long or short period; qualified; disengaged; good references; terms moderate. "M.P.S.," c/o Messrs. Southalls, Lower Priory, Birmingham.

**M.P.S.** Dispensing, Stock, Veterinary, and Counter; permanency desired; good references. Jas. Forbes, 11 Bon-accord Lane, Aberdeen.

**MANAGER**; qualified; 35; 6 ft.; married; town, country, and West-End experience, including nine years as Manager; Photography, Optics; Yorkshire, Lancashire or district; permanency. Grimshaw, Smawthorne Pharmacy, Castleford.

**MANAGER** or Locum; qualified; disengaged; 25 years' first-class experience; good appearance; excellent references. C. Parker, 177 Hammersmith Road, W.

**PART-TIME**, London or district, afternoons, evenings, or three days weekly; Student (32), thoroughly capable and trustworthy; abstainer; excellent references. R. F., 755 Wandsworth Road, Clapham, S.W. 8.

**PERMANENT** or Locum; male; qualified; 27; Midlands preferred, not essential. Dams, 70 Gough Road, Edgbaston, Birmingham.

**PHARMACIST**, qualified, seeks engagement as Manager, senior or locum; age 46; best references; good address; high-class town and country experience; moderate salary. 27 Manor Road, South Norwood, S.E. 25.

**QUALIFIED**, ex-Service man, 23, tall, requires post in good-class business; good reference. "M.P.S.," 6 Melbourne Terrace, Thirsk, Yorks.

**QUALIFIED**, 28, tall, energetic, Assistant or Manager, Counter, Windows, Photographics, etc., requires transfer to a really good Pharmacy. Apply 142/17, Office of this Paper.

**QUALIFIED** ex-service man, tall, speaks French and German, requires post as Dispenser in good-class business. Lee, 161 Brigstock Road, Thornton Heath, Surrey.

**QUALIFIED**, 22, requires position in which he could gain further experience; moderate salary; good references; disengaged. Apply 143/30, Office of this Paper.

**QUALIFIED** Assistant, 27, Scotch, seeks post in London (immediately); excellent general Retail and Hospital experience; moderate salary to commence. Address D. S. Munro, c/o Munro Press, Ltd., Imperial House, 27 Cavendish Square, W. 1.

**QUALIFIED** Pharmacist, wide experience, London (West End, City, suburban) and provinces, all branches, disengaged 27th, requires permanent Management, London, or Locum, town or country. "Ability," 24 Camden Hill Road, Upper Norwood.

**QUALIFIED**; 70s.; 28; West-End and provincial experience; Photography; anywhere; open to partnership. Cohen, 83 Spencer Place, Leeds.

**QUALIFIED** (45); permanency or locum; Manager or Assistant; good references. "Lancashire," 12 Linwood Street, Greenheys, Manchester.

**SMART**, experienced Pharmacist, 16 years as Manager, requires similar position or locum duty; town or country; modern business methods; married; disengaged. "Tristan," 26 Fox Hill, S.E. 19.

**SURGEON'S** Daughter requires Dispensing work; permanent or locum; quick, active, reliable; many years' experience; London, W., if possible. D., 152 Kensington Park Road, Notting Hill, W.

**THREE** evenings a week wanted; N.H.I. Dispensing or Counter; S.E. or S.W. district. S. Moody, 262 Camberwell New Road, S.E. 5.

**TO** Chemists.—An elderly, but active, man requires a position in the trade; can take Counter, write Tickets, and dress Windows; good references. G. G., 51 Varsity Road, Stamford Hill, N. 15.

**TO** Retail Chemists.—French Dispenser offers evening services to acquire a knowledge of English Dispensing. P.O.B. 5/5, Office of this Paper.

**UNQUALIFIED**; 22; smart, energetic; Counter, Dispensing, Photography; well recommended. Harrington, 352 York Road, N. 7.

**UNQUALIFIED** Assistant, 15 years' all-round experience, requires permanent berth; good worker and Stockkeeper; age 35; Wholesale not objected to. Address O. G. Preece, jun., Thornhill, Mortimer, Berks.

**YORKSHIRE OR NORTH OF ENGLAND**.—Competent Pharmacist as Manager or Partner; disengaged; age 40; good agricultural and store experience and personality. All particulars and references, J. Douglas, Ripon.

**YOUNG** lady (Hall and Part I. qualification); experienced; disengaged; moderate salary. A. D. S., 7 Pownall Gardens, Hounslow.



**Y**OUNG gentleman seeks position with firm of high-class Dispensing Chemists with view of serving two years' apprenticeship; Matriculated; passed first year medical course; South of England preferred. Answers to S. Girgis, 80 Seabank Road, Wallasey, Cheshire.

**Y**OUNG lady desires position with Doctor or Chemist; London or suburbs; six years' experience; accurate Dispenser; understands bookkeeping; highest testimonials. Apply Miss Dooley, 21 Claverton Street, Victoria, S.W. 1.

**Y**OUNG Lady (24), three years in Hospital Dispensary, 3½ years Nursing experience, seeks situation in Hospital, Surgery, or Pharmacy; first-class testimonials. Ridley, Wildersmonth, Wells Road, Bath.

### WHOLESALE.

The ADVERTISER may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

**A** YOUNG lady (22), disengaged; 8 years' experience in Filling and Finishing, also able to assemble orders and keep stock. A. P., 77 Canton Street, Poplar, E. 14.

**A** DVERTISER (Incorporated Secretary), 9 years' Accountant, Wholesale Manufacturing Chemists, knowledge N.H.I. Acts, good organiser, accustomed control large staff, Scotsman, well educated, desires position; highest references. Apply P.C.B. 2/25, Office of this Paper.

**A** S Representative, qualified Chemist seeks engagement; ground Wales, West of England; connections; references; only first-class firms; disengaged. Slinn, Chemist, Newport, Salop.

**A** SSISTANT, unqualified (26); good experience; used to country Wholesale. "Silver Badge" (145/25), Office of this Paper.

**C** OMMERCIAL Traveller requires extra first-class line; successful firm; small sample; England, Wales; part expenses, commission. Henri, Edmondsham Cottage, Bournemouth

**E** DUCATED young man, with successful Retail, office, and travelling experience, desires appointment with manufacturers; permanency more important than initial salary provided there is scope for advancement; could take small financial interest later. "Drugs," 21 Princes Road, Romford.

**E** IGHTEEN years' experience in Drugs, Chemicals, Sundries, Medicinal Plants, etc.; 39; Secondary School education; Bookkeeper; office routine and management. Apply M.L. 43961, Office of this Paper.

**E** X-SERVICE; 22; good theoretical knowledge of Chemistry; one year's practical experience in chemical factories; educated Secondary School, University of Wales. Apply M.L. 7238/21, Office of this Paper.

**G** ENTLEMAN, tall, of good appearance and address, excellent all-round Retail experience, sound knowledge of Chemists' requirements, keen Salesman, desires to enter Wholesale as Representative, or would accept position indoors. 145/39, Office of this Paper.

**G** ENTLEMAN requires position as Traveller with Drug (or other) house of good standing; many years' connection amongst leading buyers; keen worker; qualified Chemist; excellent references and selling record. 145/29, Office of this Paper.

**L** ABORATORY.—Man disengaged; Apothecaries' Hall; 24 years. Apply "G. W.," 12 Ebury Bridge Road, Pimlico, S.W. 1.

**M** ILLMAN, Drug, seeks situation. Apply "Amsden," 182 Glyn Road, Clapton Park, E. 5.

**S** ALESMAN, Manager, or Buyer Chemical trade; age 37; single; 14 years' experience as Junior to departmental Manager; one year as Buyer and Salesman to Chemical Merchants; also two years as Manager of Chemical Department for general merchants. Apply M.L. 2915/21, Office of this Paper.

**S** ALES Manager; age 38; married; educated Royal Technical College, Glasgow; French, German (fairly fluent), and some Russian; expert knowledge of pure Chemicals and Pharmaceutical, also of Essential Oils and Flavouring Essences, experienced in administrative control of travelling staff and sales organisation in above lines. Apply M.L. 13550, Office of this Paper.

**T** RAVELLER, experienced Salesman, Scotland and England, desires position with London firm; Drugs or Toilet; energetic, and highly recommended. W., 38 Duckett Road, London, N. 4.

### SITUATIONS WANTED.

(Colonial, Indian and Foreign.)

**M** ANUFACTURING Chemist, age 24, single, educated Hartley University, fluent Spanish, good knowledge Chemistry manufacturing and Pharmaceutical, also Medicinal Formula, wishes to go abroad; Spain or Spanish-speaking countries. Apply M.L. 13256, Office of this Paper.

### MISCELLANEOUS.

10s. for 60 words; 1s. for every additional 10 words or less.

**M** CADAM & TUCKNISS, Stock and Share Brokers, Bank Chambers, Blackheath, S.E. 3. Established 1898. Telephone: 81 Lee Green.—Shares for Sale (free of commission, subject): 75 Allenbury 8% Pfd. Ord., 21s.; 80 "B" 6% Pf., 16s. 6d.; 30 "C" Pf., 16s.; 200 Boots Pure Drug 7% Pfd. Ord., 18s. 6d.; 300 Bovril Dfd., 19s. 1½d. c.d. 9%; 13 Camwal £1 Pf., 5s. 6d.; 10 £1 Ord., 9d.; 485 Dental Mfg. £1 f.p., 11s. 6d.; 350 De Trey £1 Ord., 14s. 9d.; 200 Evans Lescher 5% Pf., 11s. 4½d.; 150 Mellins 6% Pf., 13s. 7½d.; 500 Nestle 8% Pf., 18s. 10½d.; 450 Peek Frean 5% Pf., 17s. 4½d.; 300 Pink & Plaistowe Pf., 13s. c.d.; 200 Roneo 10% Pf., 19s. 10½d.—Wanted (subject): Allenbury and Wright Layman Pf.

**S** ECOND-HAND CHEMISTS' FITTINGS.—We have an exceptionally fine selection of these in all sizes; prices are right, and goods are in first-class condition; we shall be pleased to supply particulars and prices. Call or write, RUDDUCK & CO., 262 Old Street, London, E.C. 1.

**S** HOP FITTINGS.—Second-hand Drug Fitting, glass-fronted Counter, Wall Cases, and Dispensing Screens for immediate delivery; lowest price consistent with high-class work. H. Mills & Sons, Shopfitters, 163-165 Old Street, E.C. 1.

**S** HOP FITTINGS.—10 ft. Drug Fitting, 8 ft. Counter with glass case front, 6 ft. Dispensing Screen, Perfume Case, Counter Case, Wall Case, and Counter Drawers; £135. Philip Josephs & Sons, Ltd. 93 Old Street, London, E.C. 1.

**F** OR Sale, Tins, square enamelled Health Salt, about 100 gross. Offer to ("L." 2/64), Office of this Paper.

**L** IMITED Companies formed, registered; books, certificates, and seal complete from £14; nearly 100 Chemists' companies registered. Enquire from A. B. Slack, 68 Lodge Lane, Liverpool.

**R** USHTON & CO., Shopfitting Experts to the Chemists' profession and Jewellery trades, are prepared to submit exclusive designs and estimates for Chemist requirements, and have to offer a quantity of high-grade Silent Salesmen and Counter Cases, ex stock at defiant prices; your inquiries solicited. Rushton & Co., Shopfitters, Brynmawr, Breconshire, near Newport, Mon.

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**A** RE you a Philatelist? If so, why not patronise the only Pharmacist dealer? Write for approvals, all at ½ to ¾ catalogue.

Jarvis, Pharmacist, 126 Stephendale Road, Fulham, S.W.

**T** WO Tablet Compressing Machines, 8 punch (up to ⅜ in.); power rotaries; also one single punch ditto, for tablets up to ½ in. dia.; all as new and bargains. Howe, 191 Bishopsgate, London.

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2d. per word: Minimum 2s.

### FOR DISPOSAL.

**B** OOKS and Apparatus, "Minor," Southall's "Materia Medica," specimens, Microscope and Slides; state requirements. "Redundant" (2/24), Office of this Paper.

### WANTED.

**40-OZ. SYPHONS**, any quantity. Bannister, Chemist, Bloxwich. F.S.M.C. Diploma, official text-books wanted. State edition and price, 145/26, Office of this Paper.

**PHARMACEUTICAL** Books wanted; cash offers on receipt. Gower, Bookseller, 41 Voltaire Road, Clapham.

**RADIUM SALT**, pure of Residues, old Applicators, etc. Apply Harrison Glew, Radium Laboratories, 156 Clapham Road, S.W. 9.

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# £500 Free Indemnity for Chemists

THE PROPRIETORS OF THE CHEMIST AND DRUGGIST have entered into an Agreement with The Ocean Accident and Guarantee Corporation, Ltd., of 36-44 Moorgate Street, London, E.C. 2, by which that Corporation will indemnify each annual subscriber to THE CHEMIST AND DRUGGIST, who is eligible, up to £500 against legal liability to pay for :—



- (a) Accidental bodily injury to or illness or death of any human being not in the service of or related to the Insured nor claiming compensation from the Insured under any Workmen's Compensation Act
- (b) Accidental bodily injury to or illness or death of any animal not belonging to or in the charge or under the control of the Insured or any servant or agent of the Insured
- (c) Accidental damage to property not belonging to or in the charge or under the control of the Insured or any servant or agent of the Insured

Caused by an error committed at premises to which the insurance applies by the Insured or by any person in the service of the Insured in :—

- (1) Compounding any medicine or selling by retail only any article usually sold by Chemists or Druggists.
- (2) Sight testing in ordinary course of business or selling by retail only spectacles or eyeglasses.

The £500 Free Indemnity applies to subscribers of 20/- to THE CHEMIST AND DRUGGIST who lawfully are carrying on the retail business of a pharmaceutical chemist, chemist and druggist, or registered druggist, in the United Kingdom, and who, if in Great Britain, are either

- (a) pharmaceutical chemists or chemists and druggists keeping open shop for the sale of poisons in accordance with the provisions of the Pharmacy Act 1868, as amended by the Poisons and Pharmacy Act 1908; or
- (b) executors, administrators or trustees of pharmaceutical chemists or chemists and druggists carrying on the business of chemists in accordance with the provisions of the Pharmacy Act 1868, as amended by the Poisons and Pharmacy Act 1908; or
- (c) bodies corporate, and in Scotland firms or partnerships, carrying on the business of chemists in accordance with the provisions of the Poisons and Pharmacy Act 1908; or

if in Ireland, are

pharmaceutical chemists keeping open shop for dispensing and for the sale of poisons, or are chemists and druggists or registered druggists keeping open shop for the sale of poisons in accordance with the provisions of the Pharmacy Act (Ireland) 1875, or the Pharmacy Act (Ireland) 1875 Amendment Act 1890, as amended by the Poisons and Pharmacy Act 1908.

The £500 Free Indemnity is subject to the conditions of the Policy and does not apply to those subscribers who are covered wholly or in part as, to the risks mentioned by any other insurance or indemnity scheme.

The Proprietors of THE CHEMIST AND DRUGGIST reserve the right to refuse to extend the benefits of the £500 Free Indemnity to any subscriber without giving any reason for the refusal.

**When paying your Subscription fill in the Form of Application for the Indemnity, and in due course the Policy of Indemnity will be forwarded.**

**Note: One Subscription covers one shop only.**





# MORNY

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Morny Shaving Soap has the distinction of being known as  
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